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and recommend its acceptance:

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Dean of The Graduate School

Rating of Sports Teams via Least Squares and Mean Absolute Deviation Techniques: An empirical study of three NCAA sports

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Thalia L. Hooker
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Dedication

To my parents, who each passed along interests without which I would not be here today. My mom passed along her love of sports, math, and computers, while my dad passed along his love of books.

To the athletes and coaches that have inspired me over the years with their dedication to excellence, their breath-taking moves or plays, and most of all the joy of competition.

To the outsiders like myself, be it for their race, national origin, sex, sexual orientation, disability, or other "difference."

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I would also like to thank all my friends, especially Betsy–for our spirited paddleball games and many hikes, and Cheri–for being a friend through thick-and-thin.

Thalia L. Hooker

Abstract

This is a decade-long study of rating sports teams using Least Squares and Mean Absolute Deviation methods. Three NCAA sports are studied: College Football, Men's Basketball, and Women's Basketball. Least Squares outperformed Mean Absolute Deviation in all three sports in terms of accuracy [number of correct games predicted]. The accuracy of the best Least Squares model is: 72.74% for Football, 74.61% for Men's Basketball, and 78.90% for Women's Basketball. This is the first study to consider Women's Basketball and first to use more than one year data set for the Mean Absolute Deviation model.

Four types of enhancements are applied to the basic models: Home Edge, Scaling of Differences, Start-of-Season Ratings, and Time Discounting. In three of these four, new ways of modeling these enhancements are introduced: Adjusted Average Home Edge (Home Edge), quasi-Bayesian (Start-of-Season Ratings), and the Time Discounting enhancements. The Adjusted Average Home Edge is the most effective Home Edge term. Start-of-Season ratings are used in all most accurate models. Five out of these six also have their start-of-season ratings regressed to the mean.

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Chapter I. Introduction

In this research, I will look at three NCAA collegiate sports over a span of a decade: Football, Men's Basketball, and Women's Basketball, which has never been included in other sports rating research. The goal of the research is to find team ratings that best explain the game results observed in a season. Least Squares and Mean Absolute Deviation are the two research methods I will use to find team ratings.

I will show in Chapter II that the current research used in rating sports teams and predicting game results in sporting events is Least Squares, Exponential Smoothing, Linear Models, and Mean Absolute Deviation. Of the latter method, there exists only one published paper using this method, and it only uses one year of data. Most of the research has focused on men's sports such as football and basketball–at both collegiate and professional levels. Of the research methods used in past research, Least Squares has consistently been one of the most successful in terms of accuracy [predicting game winners]. However, despite Least Squares' success, a non-research method, the betting line, typically outperforms Least Squares in terms of accuracy. Another limitation of Least Squares is the excessive impact outlying values have on the ratings. The advantage of using Mean Absolute Deviation is that its outlying values don't have too much impact on ratings. If Mean Absolute Deviation were to attain higher accuracy than Least Squares, and even of the betting line, it would be an added bonus of this research.

In Chapter III, I will develop the basic Least Squares and Mean Absolute Deviation Models to find team ratings. For each method, I first show what the conditions are for obtaining a unique solution, then I show how to obtain a numerical solution to each problem: Gauss-Seidel (Least Squares) and any Linear Programming solver (Mean Absolute Deviation). Four enhancements (Scaling of Differences, Start-of-Season Ratings, Home Edge, and Time Discounting) are

added to the basic model. In three of these four, new ways of modeling these enhancements are introduced: Adjusted Average Home Edge (Home Edge), quasi-Bayesian (Start-of-Season Ratings), and the Time Discounting enhancements. If I model all possible combinations of the values of these enhancements, there would be a total of 240 possible models. For each method, I implement 87 of these.

Chapter IV compares the 87 Least Squares and Mean Absolute Deviation models to see which has a higher cumulative accuracy for each sport. For the most accurate model, I compare the set of enhancements to see if there are any similarities, or if all best models use a different set of enhancements.

I present some applications of these team ratings in Chapter V. These applications include: a comparison of Men's and Women's Basketball accuracy, evaluation of post-season tournament selections, a procedure for selecting and seeding tournament teams, yearly top 25 teams, selecting the team of the decade for each sport, and how accuracy changes as the season progresses.

Finally, I conclude this dissertation by presenting summary and conclusions in Chapter VI.

Chapter II. Literature Review

In this review of the literature, I will document approaches that have been used to predict game results and rate sports teams. A few of the most popular methods used include Least Squares, Smoothing, and Linear-Model methodology. Of these models, Least Squares has been one of the most successful, yet typically does not predict more winners than a non-academic method: the betting line. Predicting over 70% of the winners is considered quite good. As an alternative to Least Squares, a Mean Absolute Deviation approach has also been proposed to rate sports teams (1). This particular paper compared Least Squares versus Mean Absolute Deviation using NFL data for the 1995 season.

Most of the published research focuses on men's sports both at the collegiate and professional levels. Basketball and Football in particular have received most of the attention. College Football has also attracted much research because there is no on-the-field championship.[1] Polls typically crown the Number One team, and typically the different polls don't agree on who is the Number One team. For Women's Basketball, with the exception of a master's thesis that develops "Top Twenty Polls" for NCAA women's field hockey and basketball (35), there is no published research focusing on rating or predicting game results.

This Literature Review will show that most of the studies looking at the NCAA sports studied in this research are, for the most part, non-longitudinal. With the exception of Stefani ([1977], [1980], and [1987]), most papers focus on a one-year data set. Table 1 summarizes the data sets used in the reviewed rating research. This research looks at three NCAA sports (Football, Men's Basketball, and Women's Basketball) and compares Least Squares and Mean Absolute Deviation approaches using a ten year data set. For Football the data used is for

[1] Although in 1998, the NCAA introduced the Bowl Championship Series purportedly to match the Number One and Number Two teams on the playing field to decide the National Champion.

Table 1 Summary of Data Sets Used in Sports Rating

Research	NCAA FB	NCAA MBK	NCAA WBK	NFL	SC CC FB[2]	Soccer WC	HSFB[3]	AFL	NCAA WFH[4]
Leake [1976]	1974-1975								
Stefani [1977]	1970-1975	1973-1974		1971-1976					
Stefani [1980]	1970-1978	1973-1974		1971-1979	1978	1978			
Stefani [1987]	????-????[5]	????-????[6]							
Stefani & Clarke [1992]								1980-1989	
Thompson [1975]				1973					
Harville [1977]	1975						????[7]		
Harville [1980]				1971-1977					
Raspberry [1986]			1985						1985
Clarke [1993]								1981-1986 1991-1992	
Keener [1993]	1989								
Stern [1995]	1994			1981-1991					
Wilson [1995]	1993								
Bassett [1997]				1995					

[2] Southern California Community College Football
[3] High School Football
[4] Women's Field Hockey
[5] Not sure what years. Stefani says: "applied to each of the last three football seasons."
[6] Not sure what years. Stefani says: "applied to each of the last three football seasons."
[7] Harville develops method that applies to Ohio High School Athletic Association (OHSAA) but does not report specific results for any data set.

the 1987-1996 seasons, while for Men's and Women's Basketball it was for the 1988-1997 seasons. In this research I implement three of the four types of enhancements that I describe in Sections 2.1.5 and 2.4.1. Some of my implementations of the enhancements follow from the literature, but others are new ways of implementing those enhancements.

In addition to a comparison of Least Squares and Mean Absolute Deviation, in Chapter 5 I describe several applications of sports rating research. These applications include: Comparing Parity in Men's and Women's Basketball, How to Evaluate NCAA Tournament Selection and Seedings, and Determining the Team of the Decade for a Sport.

In the next sections of this chapter, I review Least Squares techniques, a Least Absolute Error approach, a Linear Model methodology, an Exponential Smoothing technique, and miscellaneous ranking and rating methods.

2.1 Least Squares Techniques

The basic Least Squares model used to find sports teams ratings is to find ratings that best explain the results of all the games played. The problem formulation looks like this:

$$\min \sum_{\forall g(i,j)} [(X_i - X_j) - A_{ij}]^2$$

where

$g(i,j)$ is game between team i and j

X_i is team i's rating

A_{ij} is team i's margin of victory against team j.

One of the first Least Squares papers on rating sports team to appear in the literature was Leake's [1976] paper "A Method for Ranking Teams: with an Application to College Football"(9). Although this was Leake's only paper on the

subject, he raised many of the important problems one faces in rating sports teams. These issues include intransitivity of game results and subjectivity in the ratings. I will address these issues further in the following subsections.

In 1976, Leake observed "that ratings are analogous to voltages in electrical networks, they are assigned to make rating differences as close to game outcomes as possible in some sense." Leake chose to minimize these differences in a Least Squares sense. Thus, we can think of the ratings he developed as Least Squares ratings. Leake applied Least Squares ratings to the 1974 and 1975 college football seasons using the results of the 132 top teams.

Around the same time of the Leake paper, Stefani [1977] documented a Least Squares approach (36) he had been using to predict college football and professional football for the Fort Worth Star-Telegram during the 1971-76 seasons. In addition to these two sports he studied college basketball for the 1973 and 1974 seasons.

Stefani reports that as early as the 1930's, Least Squares techniques were used to rate football teams. The P.B. Williamsen "System" combined three factors to rate football teams: hardness of schedule, gameness, and a "guts" factor using calculus and Least Squares.

Based on Harville's 1977 (3) work on predicting games using linear systems methodology, Stefani [1980] saw the need to use a shrinking factor (38) in calculating predicted winning margins (p.w.m.). Harville's p.w.m. were closer together than those of Least Squares, while Stefani's p.w.m.'s were consistently higher than observed. In Harville's work, the shrinking factor is built into his linear model methodology. Stefani improved his Least Squares method by removing the home edge effect from past ratings, re-introducing the home edge for prediction purposes, and using an optimal reduction factor (shrinking factor) to produce unbiased estimates for the winning margin. In addition to football (both college & professional) and college basketball, Stefani also applied Least Squares to the 1978 World Cup of Soccer.

Stefani [1987] compared five prediction methods for college football and professional football (39) by looking at each predictor's accuracy and the average absolute error between the predicted and the actual winning margin. The five methods are: Nevada sports books betting line, Least Squares, weighted Least Squares, James-Stein, and Harville. Stefani concluded that there was no statistically significant difference in predictive performance between the four estimators over 2435 football and basketball games. He also found that the sports book typically picked the winning team about 1% more accurately, 70.9% versus 69.8%.

Stefani & Clarke [1992] applied two prediction methods to 1,446 Australian rules football games(37). One of the methods is Stefani's Least Squares approach with a shrinking factor and a home edge term. The other prediction scheme by Clarke used an exponential smoothing with a 0.75 power of error to pre-shrink the Least Squares ratings, and then predicted game outcomes with the rating differences and home edge term.

More recently, Stern [1995] compared[8] several variations of the Least Squares ratings system (41), a Bayesian Least Squares approach that used games from more than one season, and the point spread using 1,027 NFL games played in the second half of nine seasons (1981-1991[9]) seasons. The six Least Squares variations he studied were: Least Squares (L.S.); L.S. modified to reduce blowouts; L.S. modified to reduce blowouts, 10-Point bonus for winning; L.S. modified to reduce blowouts, 50-Point bonus for winning; L.S. modified to reduce blowouts, more weight to recent games; L.S. modified to reduce blowouts, 10-Point bonus for winning, more weight to recent games.

[8]Because Stern is only predicting outcomes of games played in the second half of the season, the accuracy he reports is probably higher than other researchers who study a full season but don't use more than a season's worth of data. In ratings that only use one season's worth of data, early season ratings aren't very accurate.

[9]Two years of data were omitted because of shortened seasons due to labor problems.

Of the methods Stern compared, the betting line predicted the most accurately, 66.3%, and has the lowest root mean squared prediction error and mean absolute prediction error. The Bayesian approach was second (64.9% accuracy) in all categories to the point spread. He concluded that of the six Least Squares methods, "For predicting games, least squares ratings based on game scores (modified to minimize the effect of blowouts) with no bonus for winning seems best."

In addition to observing the connection between ratings and node voltages, Leake [1976] made a few other important observations for sports rating research. I will address these in the following four sub-sections. These observations include: intransitivity in game results are addressed by using Least Squares; each rating system is, in some way, subjective; the graph connection matrix takes into account a team's opponents and their opponents; and that as by-products of the rating system, we can calculate a team's strength of schedule and a measure of its average performance.

2.1.1 Intransitivity of Game Results. By using Least Squares, Leake said he addresses intransitivity in game results (A defeats B, B defeats C, C defeats A). "The problem of intransitivity is handled by making a Least Squares fit of rating differences to score differences, and happens to be exactly the same method that nature employs in handling analogous discrepancies in natural electrical network behavior." Leake believes intransitivity is one of the two basic difficulties in developing accurate football ratings. The other challenge is subjectivity.

2.1.2 Non-subjective Ratings. The selection of a college football champion through the use of opinion polls is one of the most debated issues in sports, and perhaps is responsible for some of the sports rating research. In other sports the issue is not so heatedly debated because they have post season tournaments, which decide a national champion on the playing field. Teams' season-long ratings and

final season records are made irrelevant by the championship. They are used, though, to a certain extent when selecting teams to the tournament. In contrast, in college football, you may end up with two undefeated teams, and a split in the different polls as to who really is the national champion.

> "Part of the difficulty in applying statistical methods to a problem like rating teams is that there is no unanimity about what the rating should measure. Should the goal be to determine the best team in college football in the sense that it would be most likely to defeat the others or should the goal be to reward the team with the most impressive season-long performance?" Stern [1995]

Leake thought subjectivity could be eliminated by simply letting you know beforehand what subjective factors would be used. For example, Leake indicated in his paper that Least Squares was his choice of distance measure, how he would weigh the games, and any adjustments he would make to the winning margin.

2.1.3 Underlying Graph Connection Matrix. Regarding the underlying graph connection matrix, Leake stated, "The main feature of the method is that it takes into account a team's opponents, and their opponents, etc. in an optimal way through the graph connection matrix." We need to note that many methods that keep track of the opponents of a given team are, in fact, indirectly incorporating the graph connection matrix within the model. Methods that do not incorporate the graph connection matrix are those that only use the first order connections. For example, if you only rate teams using their win-loss percentage and the collective win-loss percentage of the opponents, you are ignoring the win-loss percentage of their opponents' opponents.

2.1.4 Team Strength of Schedule and Average Performance. Leake [1976] observed that from his rating scheme, a team's rating is equal to its average performance plus its schedule difficulty. However, he pointed out that you must first compute the team's ratings, and then use these ratings to calculate an

individual team's average performance and its strength of schedule. Leake's "performance" measure "depends only on the scores of the games the team has engaged in, and does not depend upon the difficulty of opposition, except as it is reflected through the scores." If all games are weighted equally, average performance is "total performance divided by the number of games played" and strength of schedule is the "average of the ratings of the teams played."

Stern [1995] noted that because ratings are based on a team's performance and its opponents' ratings, "The Least Squares ratings implicitly reward teams for playing difficult opponents."

2.1.5 Enhancements. Least Squares researchers have tried different enhancements to the basic Least Squares approach, such as home edge, shrinking factor, and weighted Least Squares, to try to address some of the limitations of basic Least Squares. In this subsection, I will not only expand on these three enhancements, but also describe how researchers have adjusted a game's winning margin in the basic Least Squares formulation to improve ratings and predictions. Shrinking factors and adjusted winning margins are researchers' attempts to address the problem of outliers.

2.1.5.1 Home Edge Term. The home edge term is the almost universal enhancement used by researchers in predicting game outcomes or rating sports teams. Leake [1976] is one of the few not to have incorporated the home edge term into his Least Squares implementation. A single home edge term for all teams is also used most frequently versus an individual variable for each team. The reasons for this are probably that a single term is easier to implement, and also that it introduces less variability to a model than a team-by-team home edge estimate.

2.1.5.2 Adjustments to Winning Margin. In his Least Squares implementation, Leake [1976] also studied three adjustments to a game's winning

margin: 100 plus the point spread, 50 plus the point spread, and a normalized function ranking. These adjustments to the winning margin are incorporated into his "game outcome measure." The 100 plus the point spread, Leake noted, results in ranking similar to wire service rankings. Other researchers, such as Stefani [1977], had required an average rating of 100 to make their ratings look comparable to wire service ratings.

Stern modified any observed winning margins above 20 points because, he noted, "As with Least Squares regression, Least Squares ratings are sensitive to outlying values. Such values may have an excessive impact on the ratings" Stern [1995]. He therefore modified his ratings so that any winning margin above 20 points is replaced with 20 points plus the square root of the margin of victory exceeding 20 points. If *wm* represents the winning margin of victory, and *awm* the adjusted margin of victory, then:

$$\begin{aligned} awm &= wm, && \text{if } wm \leq 20 \\ &= 20 + \sqrt{wm - 20}, && \text{if } wm > 20 \end{aligned}$$

2.1.5.3 Shrinking Factor. Shrinking factors were introduced to Least Squares after Stefani noted that Harville's [1977, 1980] linear systems methodology produced p.w.m. that were closer together than Least Squares. The first shrinking factor Stefani [1980] developed is an optimal reduction factor, which produced unbiased estimates of the winning margin. He calculated the shrinking factor, $\hat{\lambda}$, as the ratio of the cross correlation of adjusted win margin with rating difference, over the autocorrelation of rating difference with itself:

$$\hat{\lambda} = \frac{\sum_{i=1}^{N} \sum_{n(i)=0}^{L(i)-1} w_a(i, j, n(i)+1)(\hat{r}(i|n(i)) - \hat{r}(j|n(i)))}{\sum_{i=1}^{N} \sum_{n(i)=0}^{L(i)-1} (\hat{r}(i|n(i)) - \hat{r}(j|n(i)))^2}$$

where

N = number of teams

$n(i)$ = number of games team i has played

$L(i)$ = total number of games for which predictions have been made

$w_a(i,j,k)$ = adjusted winning margin of team i over team j in team i's k-th game after removing team i's home advantage

$\hat{r}(i|n(i))$ = estimate of team i's rating using all previous games.

For 600 college football games, Stefani found $\hat{\lambda} = 0.67$, and for 200 professional football games, $\hat{\lambda} = 0.75$. For both sports, the average absolute error of the model decreased from 12.05 to 11.44 and from 14.23 to 13.60, respectively. However, the accuracy of either model does not improve unless he uses both the shrinking factor and a home edge term.

In 1987, Stefani looked at other methods of calculating the shrinking factor. For the Least Squares and the weighted Least Squares approaches, Stefani [1987] calculated the shrinking factor, L, as a ratio of the sample covariance of the adjusted margin of victory, w_a [winning margin - home advantage] and the estimate of w_a, $\hat{w}_a$ divided by the sample variance of $\hat{w}_a$. In the 1987 paper, Stefani also looks at the James-Stein(6) (40) approach and Harville's "effective L" shrinking factor. The James-Stein approach, referred to as empirical Bayes, shrinks the Least Squares ratings using the variance of each team's ratings. In the James-Stein approach, the assumption is that the ratings are random variables and the shrinking factor is derived from a Gaussian-maximum likelihood-Bayes procedure. According to Stein, the James-Stein shrinking factor, L, takes this form:

$$L = 1 - \frac{N-3}{\sum_{i=1}^{N} \frac{(r_i^k - \bar{r})^2}{s_i^2}}$$

where

N = number of teams

r_i^k = team i's rating during week k

$\bar{r}$ = average L.S. rating for the N teams

s_i^2 = estimate of team i's rating sample variance

Although Harville assigns L equal to one [hence referred to as "effective L"], the shrinking factor is built into his linear model methodology when he replaces the current game $N(i)$ with $N(i) + g$, where g is a ratio of sample variances. Stefani found g to be typically around 3.

2.1.5.4 Weighted Least Squares. Researchers have used a variety of "weighting" mechanisms to give certain games more importance. One widely held view is that a good predictor of how well a team will play in post season is how well the team is playing down the stretch, or to give more weight to games at the end of the season versus early season games. The surprising result is that weighted Least Squares have not improved prediction, or if they have, not by much.

Another perspective on placing more weight on certain games over others is developing final college football rankings, where one would like to weigh bowl games' results more heavily than regular season games. To distinguish between regular season games and bowl games, Leake [1976] weighted all games equally (weight=1), with the exception of bowl games, which he weighs twice as much as regular season games (weight=2).

Stefani's [1987] approach to weighted Least Squares was very different. He defined his weights as measures of a team's opponents' "consistency." Stefani defined team i's opponents' consistency as the sample variance of Stefani's adjusted winning margin, w_a plus the ranking of team j prior to this game. Stefani's ratings using weighted Least Squares is:

$$r_i^k = \frac{1}{Q_i^k}[(Q_i^k - q_i^k)r_i^{k-1} + q_i^k(w_{a_{ij}} + r_j^k)]$$

where

r_i^k is team i's rating during week k

Q_i^k is the sum of the $N(i)$ weights on team i's $N(i)$ games up to week k

q_i^k is week k's weight

r_i^{k-1} is team i's rating in week $k-1$

$w_{a_{ij}} = w_{ij} - h_{ij}$ is the margin of victory of team i over team j (w_{ij}) after removing the home edge (h_{ij}).

2.1.6 Numerical Solution. Stefani used an iterative approach to calculate his ratings, and he accelerated convergence with a "wise choice" of initial ratings. Leake [1976] used the Crout Reduction algorithm to solve his Least Squares equations. Stern [1995] recommends using any standard regression program.

2.1.7 Accuracy and Average Absolute Error. Least Squares researchers have typically used two criteria in evaluating the effectiveness of their methods: accuracy and average absolute error. If a method predicts 70% or more correct games, it is considered quite successful. Average absolute errors above 10 points are quite normal.

Despite the scholarly success in predicting game results, most researchers have not been able to attain higher accuracy, on a regular basis, than those achieved by the betting lines. This suggests that the collective knowledge of the bettors produces an efficient determination of the point spread. If this is indeed the case, a general attempt to use quantitative ratings for betting purposes will probably prove futile. However, this does not mean that such models could not be used to search for inefficiencies in the gambling point spread.

2.2 Least Absolute Error Approach

To date, the only published paper to use Least Absolute Error to rate sports teams is Bassett's 1997 "Robust Sports Ratings Based on Least Absolute Errors" (1). Bassett substitutes Least squares with the Least Absolute Error in the linear model used to rate sports teams based on game scores. The motivation for using Least Absolute Error "comes from the fact that they are not distorted by outliers,

and hence there is no need for modifications because of runaway scores." For the 1993 NFL season, Bassett compares the Least Squares and the Least Absolute Error estimates.

2.3 Linear-Model Methodology

Harville [1977] developed a rating system for college and high school football teams using linear-model methodology (3) on a game's winning margin. The winning margin is modeled as the sum of the home term, the difference in the characteristic level of performance of the two teams, the difference in the two team's deviation from their characteristic performance levels, and a residual term. The characteristic performance of a team was assumed to be random variables, while the deviations from the characteristic levels of performance were calculated from a first-order autoregressive process.

Similar to Leake [1976], Harville suggested a measure of a team's strength of schedule using his method: the average of the characteristic performance levels of its opponents. He also noted that depending on what your rating objective is, you could use his method to determine three different ratings. These are based on: 1) characteristic performance level over a long sequence of games, 2) average of actual performance in n games, and 3) team's performance level in a $(n+1)$st game.

For the 1975 college football season, Harville compared three variations of his rating scheme with predictions from the Football News (FN): 1) PS-B uses all information from the point spread, 2) PS-1 only win-loss information, and 3) PS-15 disregards point spreads above 14.5 (i.e. truncates anything above 15). Harville only looked at weeks 6-12 because he said there were too few games played early in the season, which would put his method at a disadvantage.[10] The FN performed

[10]Similar to Stern [1995], the accuracy he reports is probably higher than of other researchers that study a full season but don't use more than a season worth of data. In ratings that only use one season worth of data, early season ratings aren't very accurate.

better than any of Harville's methods in terms of winners predicted, average squared error, and average absolute error.

In 1980, Harville made some improvements to the method and used it to predict National Football League (NFL) game results for the 1971-1977 seasons (4). The main improvement Harville made was to include more than one season's data in his predictions. He also improved the efficiency of his algorithm by using Kalman filters and other smoothing algorithms.

Like the 1977 study, the betting line also performed better than Harville's model. The betting line predicted more winners, exhibited lower average absolute error, and exhibited lower average squared error.

2.4 Exponential Smoothing

Clarke [1993] used an exponential smoothing technique (2) to forecast Australian Rules Football matches during the 1981-86 and 1991-92 seasons. Some of the enhancements to the basic exponential smoothing approach were: team/ground interaction, team interaction, and regressing a team's rating towards the mean at the start of a new season. Clarke also weighed more heavily errors in close matches, and "errors across the win-lose boundary."

When team i plays team j at ground k, Clarke's prediction equation is:

$$P = R(i) + G(i,k) + I(i,j) - R(j) - G(j,k)$$

where

$R(i)$ is team i's rating

$G(i,k)$ is a measure of how team i performs at ground k

$I(i,j)$ measures the interaction between team i and team j.

2.4.1 Enhancements. Clarke studied several enhancements to his basic exponential smoothing method. He found all enhancements except one, team-to-team interaction, to be significant in his model.

2.4.1.1 Team-Ground Interaction. The team/ground interaction is in some ways comparable to a home edge term. One would expect most teams to perform best on their home field.

2.4.1.2 Team-to-Team Interaction. "$I(i,j)$ was introduced as it was a widely held view of supporters that some teams always performed well (or badly) against some other teams irrespective of their relative ladder positions." Clarke found the team-to-team interaction, $I(i,j)$, to be nearly zero. Therefore, the belief that there is a team interaction seems to be unfounded.

2.4.1.3 Start-of-Season Ratings. At the start of a new season, Clarke set a team's starting rating by regressing the team's previous season rating to the mean. "... because of team changes, injuries and a host of other random effects we expect, on average, the best teams to get weaker, and the weak teams to get better" Clarke [1993]. Given an average team rating of 70, Clarke calculated the ratings at the start of a season in the following manner:

70 + k*(rating at end of previous year - 70)

Clarke set $k = 0.8$, although he expected k to change from season to season.

2.4.1.4 Adjustments to Winning Margin. Clarke tried to place more emphasis on the results of close games and on predicting a game winner incorrectly. To achieve this, he used the following error function:

$$E = sgn(M) \cdot |M|^x - sgn(P) \cdot |P|^x$$

where x is the chosen power.

The parameters Clarke used in his model are:

- *power of x: 0.75*
- *main smoothing value: 0.2*
- *ground factor: much smaller than 0.2*
- *team-to-team interaction: 0*
- *k, end of season shrinkage: 0.8*

2.5 Miscellaneous Ranking and Rating Methods

While Least Squares has been one of the most frequently used methods for rating of sports teams and predicting game results, there are a number of other approaches that have not been as widely studied. In this section, I will document some of these approaches.

2.5.1 Maximum Likelihood Methodology. Thompson [1975] studied the National Football League and pointed out the problem of selecting playoff teams solely based on win-loss percentages. Because wins and losses don't take into account a team's strength of schedule, some truly deserving teams may not gain a playoff spot because they play in the "wrong" division. In current professional sports leagues this problem still arises today, but it doesn't occur as frequently. Most sports have increased the number of teams advancing to the playoffs or added "wild card" teams (non division-winning teams advancing to playoffs).

Thompson's maximum likelihood approach (42) is to find team rankings based solely on game results (win, loss, or tie) that minimize the number of upsets observed during a season. An upset occurs when a lower ranked team defeats a higher ranked team, and the size of the upset is their rank differential. When two teams of different ranks play, Thompson assumes the higher-ranked team would

win with a certain probability. Using these probabilities, he then finds rankings that explain the observed results with the highest probability of occurring. Although a Quadratic Likelihood Maximum (QLM) was slightly better in likelihood terms, Thompson chose a Normal Likelihood Maximum (NLM) approach because it was easier to work with.

For the 1973 NFL regular season games Thompson studied, he found home edge did make a difference. However, he did not include this factor in his ranking scheme. Thompson suggested his method could be improved with the use of a home edge term and a normal with greater kurtosis. The drawbacks of maximum likelihood methods, according to Thompson, is that they estimate the variance with a downward bias.

2.5.2 Perron-Frobenius Theorem. Keener [1993] noted that "a number of ranking schemes rely in some fundamental way on the Perron-Frobenius theorem." (7) Given

$$A\mathbf{r} = \lambda\mathbf{r}$$

the Perron-Frobenius theorem states:

> "If the (nontrivial) matrix A has nonnegative entries, then there exists an eigenvector $\mathbf{r}$ with nonnegative entries, corresponding to a positive eigenvalue λ. Furthermore, if the matrix A is irreducible, the eigenvector $\mathbf{r}$ has strictly positive entries, is unique and simple, and the corresponding eigenvalue is the largest eigenvalue of A in absolute value (i.e., is equal to the spectral radius of A)." Keener [1993]

Keener [1993] compared four different ranking schemes: 1) direct linear method based on the eigenvalue problem, 2) non-linear method, 3) Least Squares estimates of probabilities, and 4) maximum likelihood method (Bradley-Terry model). The first two methods use the Perron-Frobenius theorem directly, while

the latter two use it indirectly. Keener didn't compare the ranking approaches by either their accuracy or average absolute error, he just showed the different rankings the methods produced, and analyzed why the rankings were different. However, he suggested an alternative ranking method whose objective would be to minimize the number of upsets. An upset occurs when a higher ranked team loses to a lower ranked opponent.

Of the four methods Keener [1993] compared, the maximum likelihood method had the fewest upsets (100), followed by the direct linear method with 102. The Least Squares estimates of probabilities had two fewer upsets (108) than the nonlinear method (110), which had the most.

2.5.3 Neural Network Approach. Wilson [1995] ranked college football teams during the 1993 football using a Neural Network (45) approach. In Wilson's model, each neuron represented a team. The neurons were connected with fixed weights, which represented the result of the game (win, lose, or tie) and the scoring margin. Wilson adjusted his winning margins so that winning (losing) margins above 15 (below -15) were truncated to 15 (-15). Wilson's transfer function incorporated a game's outcome (win, lose, or tie), the magnitude of the outcome, and the strength of the opponent. A weighted average of these three elements determined the output value of a neuron–a team's relative strength. Teams were then ranked based on their neural output value. Wilson doesn't report the accuracy of his method.

2.5.4 Top 20 Polls for Women's Sports. In the only study to look at ranking of women's sports, a 1986 master's thesis, Raspberry developed a model to aid in creating Top 20 Polls (35) for two NCAA women's team sports: field hockey and basketball. To apply the method to other sports, Raspberry recommends modifying some of the performance variables as needed by each different sport.

Using questionnaires in the 1984-85 field hockey and basketball seasons, Raspberry identified the following variables as the most important in determining the Top 20 polls: win/loss records, scoring margins, credible losses, strength of schedule, and a team's performance quality measure.

> "The model is not a prediction tool, per se. What the model is is a mathematical equation which evaluates some specific number of teams from a standard set of selection criteria. These teams are ordered based on a series of weighted variables generating a poll derived from quantitative data" Raspberry [1986].

2.6 Summary

This chapter showed that most sports rating research has been non-longitudinal, especially for the Mean Absolute Deviation model and sports such as Basketball, where data collection used to be more difficult. Least Squares is the technique most widely used, while there has only been one published paper on Mean Absolute Deviation technique. In the next chapter, I will develop models using these two techniques to study three NCAA sports, introduce a few new enhancements, as well as use previously published enhancements.

Chapter III. Methods

This chapter discusses the methods used to find solutions to the two approaches introduced in the previous chapter, Least Squares and Mean Absolute Deviation. First, I show the conditions required for obtaining a unique solution to each method. Then, I show that the Least Squares formulation can be solved using a matrix iterative method, Gauss-Seidel, while the Mean Absolute Deviation model is a linear program that can be solved with any linear programming solver. In this chapter I also present the methods used to incorporate the enhancements: Scaling of Differences, Start-of-Season Ratings, Home Edge, and Time Discounting. Table 2 on page 28 summarizes the values used for each of these enhancements. I conclude this chapter by describing how I collected the 30 years, 10 years for each sport, of data for this research.

3.1 Least Squares

The basic **Least Squares** model for finding teams' ratings for a sport based on game results is to find ratings, X_i for all teams $i = 1..N$, that minimize the difference in game outcomes:

$$\min \sum_{\forall g(i,j)} [(X_i - X_j) - A_{ij}]^2 \tag{1}$$

where

$g(i,j)$ is game between team i and j

X_i is team i's rating

A_{ij} is team i's margin of victory against team j.

Team i's **Rating**, X_i, are found by minimizing the nonlinear function in Equation 1. The **Winning Margin** of team i over team j, A_{ij}, is equal to team i's score minus team j's score. The **Predicted Winning Margin (P.W.M.)** for the

game between teams i and j is team i's rating prior to this game, X_i, minus team j's rating prior to this game, X_j.

If there are N teams in a sport, we can find all ratings, X_i, by taking N partial derivatives (one for each variable), setting each partial derivative to zero, and solving the resulting system of N equations with N unknowns (2).

The N partial derivatives of (1), $\frac{\partial L}{\partial X_i}$, take this form:

$$\frac{\partial L}{\partial X_i} = 2\left(\sum_{\forall g(i,j)} [(X_i - X_j) - A_{ij}]\right)\left(1\right) \tag{2}$$

Next we set each partial derivative from (2), $\frac{\partial L}{\partial X_i}$, to zero:

$$\begin{aligned} 2\left(\sum_{\forall g(i,j)} [(X_i - X_j) - A_{ij}]\right) &= 0 \\ \sum_{\forall g(i,j)} X_i - \sum_{\forall g(i,j)} X_j &= \sum_{\forall g(i,j)} A_{ij} \end{aligned} \tag{3}$$

The first summation on the left of equation (3) can be replaced by constants that indicate the number of games team i has played, c_i. Also, for each opponent of team i, there is an X_j term that is multiplied by a constant, c_{ij}, that represents the number of times the two teams have played each other:

$$c_i X_i - \sum_{\forall g(i,j)} [c_{ij} X_j] = \sum_{\forall g(i,j)} A_{ij} \tag{4}$$

where

c_i is the number of games team i plays

X_i is team i's rating

$g(i,j)$ is game between team i and j

c_{ij} is number of games team i and j play

A_{ij} is team i's margin of victory against team j.

The resulting N x N matrix on the left side of equation (4) is a **sparse matrix.** Varga (44) describes sparse matrices as "equations arising from discrete approximations to partial differential equations. These matrix equations are generally characterized by the property that the associated square matrices are *sparse*, i.e. a large percentage of entries of these matrices are zero." According to Noble and Daniel (34), in practice, sparse matrices would have less than 15% non-zero entries.

In Basketball, on average, teams play 25-30 games during the season; therefore, each row has 25-30 (or fewer[1]) non-zero entries per row. There are over 300 Division I basketball teams, and each column represents a team's variable, X_i. Each row of the matrix represents a team's games. For the case where the number of teams is 300 and all teams play 25 games, the matrix has approximately 8.67% non-zero entries; therefore, we are primarily dealing with sparse matrices.

If team i has m opponents, where $j = 1..m$, team i's equation has $m + 1$ non-zero entries on the left of equation (4):

$$c_i X_i - [c_{i1} X_1 + c_{i2} X_2 + \cdots + c_{im} X_m] = \sum_{j=1}^{m} A_{ij} \tag{5}$$

where

c_i is the number of games team i plays

X_i is team i's rating

c_{ij} is number of games team i and j play

A_{ij} is team i's margin of victory against team j.

[1]A team might play an opponent more than once during the season; therefore, the number of non-zero entries in the row is the number of distinct opponents of the team plus the entry for the given team.

The matrix on the left of the equation is real symmetric with positive valued diagonal elements. The solution to this system of equations, the values of the variables $(X_1, X_2, \ldots, X_N)$, are the ratings for their corresponding teams.

Bassett (1) describes when the system of equations has a unique or multiple solutions:

> The ... objective function is a polyhedral convex function whose minimum can occur at a vertex; in this case the solution is unique. Alternatively, the minimum can occur on a convex facet of the objective function, in which case there are multiple solutions.

During the first weeks of the season, this model does not give meaningful ratings because there are a number of subsets of teams that have played each other but not other teams outside of their subset. Hence, the ratings are comparing within subsets of teams, but not necessarily subset-to-subset.

In graph theory terminology, the underlying **graph connection matrix** for this model is not strongly connected early in the season. If each team represents a node in a graph, then there are two arcs from node i to node j for each game $g(i, j)$; one arc is directed from i to j, while the other arc is directed from j to i. A directed graph is **strongly connected** if, from any node i, there exists a directed path connecting node i to node j. Once the directed graph is strongly connected [enough games have been played in the season], the ratings are meaningful for all teams.

One way of getting around the problem of the underlying graph connection matrix not being strongly connected is to introduce a **dummy team**, X_0, which each team plays to a tie in their *0-th* game ($A_{0j} = 0.00, \forall_j$). This concept of adding a dummy team to make an unconnected graph connected is illustrated in Figure 1, where the *Unconnected Directed Graph* becomes strongly connected once we add the dummy team 0 (*Strongly Connected Directed Graph* of the same figure). The *Unconnected Directed Graph* is unconnected because there isn't a path from either

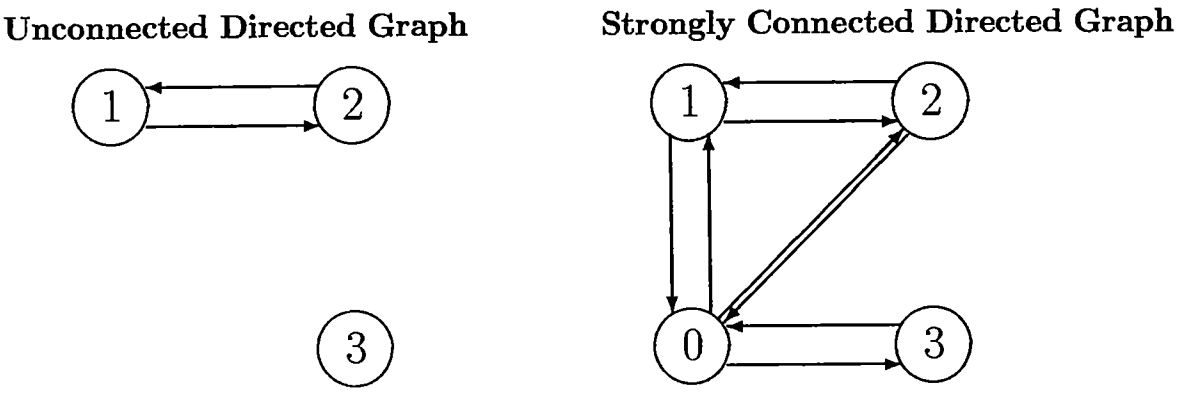


Figure 1 Directed Graphs

node 1 or node 2 to node 3. Meanwhile, when we add the dummy team 0, which each teams plays once, to the *Unconnected Directed Graph*, we can find paths from any team to another. Therefore, the directed graph is now strongly connected.

The addition of the dummy team could, for the sake of a mathematically sound formulation, obviously add invalid information to the model. In the above example, giving teams (1, 2, and 3) a tie with the dummy team gives team 3 a ranking equal to the average of teams (1 and 2). This would be the case even if teams (1 and 2) were NFL teams while team 3 is a high school team.

However, the addition of the dummy team offers a practical advantage. By adjusting the scores of the dummy team games, it is possible to incorporate Start-of-Season Ratings into the model. This a priori information would typically come from the previous year end-of-season ratings or other sources, such as preseason polls. The Start-of-Season Ratings enhancement are covered in more detail in Section 3.1.1.2 of this chapter.

The basic model plus the dummy team now becomes a system of $N + 1$ equations with $N + 1$ unknowns. In this research, all Least Squares models incorporated the dummy team.

In addition to guaranteeing that the system of equations is connected, we also need to guarantee that it has a unique solution. This can be achieved by setting the rating of the dummy team to a fixed value of 100.00, $X_0 = 100.00$. For the *Connected Directed Graph*, if $A_{12} = 5$ ($A_{21} = -A_{12} = -5$) and $A_{0j} = 0.00, \forall_j$, we have this system of linear equations:

$$\begin{array}{rrrrrrrrr} & 3X_0 & - & X_1 & - & X_2 & - & X_3 = & 0.00 \\ - & X_0 & + & 2X_1 & - & X_2 & & = & 5.00 \\ - & X_0 & - & X_1 & + & 2X_2 & & = & -5.00 \\ - & X_0 & & & & & + & X_3 = & 0.00 \end{array} \tag{6}$$

that doesn't have a unique solution because the four rows are linearly dependent. However, if we set $X_0 = 100.00$, the system has a unique solution: $X_0 = 100.00$, $X_1 = \frac{305}{3}$, $X_2 = \frac{295}{3}$, and $X_3 = 100.00$.

A drawback of this basic model is that it doesn't let us explore issues such as the effect of playing on a team's home court, teams running up the score against weak opponents to improve their poll positions, whether late games have more weight than early games, and whether all teams start with a clean slate at the beginning of the season.

3.1.1 Enhancements. In this research, the following enhancements were considered: Scaling of Differences, Start-of-Season Ratings, Home Edge, and Time Discounting. Table 2 shows the possible values for each enhancement. If all combinations of the possible values would have been considered, there would have been a total of 240 Least Squares models [5 X 4 X 3 X 4 possible values, respectively]. I implemented 87 of these 240 models. A complete list of the 87 models can be found in Appendix A.

Table 2 Summary of Implemented Enhancements

Enhancements	**Values**
Scaling of Differences	1.00 [Actual] 0.90 0.75 0.50 0.00 [±1]
Starting Ratings Regressed to Mean	NONE 1.00 0.95 0.90
Home Advantage	NONE Average Home Edge Adjusted Average Home Edge
Time Discounting	1.00 0.95 0.90 0.85

3.1.1.1 Scaling of Differences. **Scaling of Differences** refers to modifying the winning margin of victory to obtain a better fit of the data. The basic idea is to transform the winning margins of victory, A_{ij}, like this:

$$\mathcal{A}_{ij} = \begin{cases} (A_{ij})^{\theta} & if \quad A_{ij} \geq 0.00 \\ -(-A_{ij})^{\theta} & if \quad A_{ij} < 0.00 \end{cases} \tag{7}$$

where

θ is a constant: $0.00 \leq \theta \leq 1.00$

A_{ij} is team i's margin of victory against team j

$\mathcal{A}_{ij}$ is team i's adjusted margin of victory against team j.

For this research, I considered four transformations of the winning margin including the case where I didn't transform the winning margin (i.e., used actual winning margins). The values I used for θ were: 0.50, 0.75, and 0.90. $\theta = 1.00$ is equivalent to not transforming the winning margins of victory. $\theta = 0.00$ is the

special case where you are only interested in whether a team wins or loses, and not by how much.

To reflect adjustments to the winning margin in the basic Least Squares model presented in Equation 1, you would simply substitute $\mathcal{A}_{ij}$ for A_{ij}:

$$\min \sum_{\forall g(i,j)} [(X_i - X_j) - \mathcal{A}_{ij}]^2 \tag{8}$$

where

$g(i,j)$ is game between team i and j

X_i is team i's rating

$\mathcal{A}_{ij}$ is team i's adjusted margin of victory against team j.

In the case when you were not making adjustments to the winning margins, the two equations would be equivalent.

3.1.1.2 Start-of-Season Ratings. Two **Start-of-Season Ratings** are considered: 1) the typical one: all teams start off with the same rating at the beginning of the season, and 2) a quasi-Bayesian approach to initialize all teams' Start-of-Season ratings.

When rating teams during a season, it is typical not to use past seasons' results. The drawback of this approach is that early season predictions are not very good, and if you aren't using a dummy team, the underlying graph connection matrix is not strongly connected.

In this research, instead of using a Bayesian model that uses results of games from a previous season, I use a **quasi-Bayesian** enhancement to the Least Squares model. The approach is to set each team's starting ratings to either their previous year's final rating, or their previous year's final rating regressed to the mean. The rationale for using final ratings regressed to the mean is regression to the mean. Stern's 1995 article (41) is an example of research using Bayesian models.

For the quasi-Bayesian approach that regresses starting ratings to the mean, the starting ratings were set using this formula:

$$X_i = \omega\, X_i^{-1} + 100.00\,(1 - \omega), \quad 0.00 \leq \omega \leq 1.00 \tag{9}$$

where

X_i is team i's starting rating for the current year

X_i^{-1} is team i's final rating from the previous year.

In this research, the three values used for ω were 0.90, 0.95, and 1.00. $\omega = 1.00$ is the special case, where the previous year's ratings were used as the starting rating for the current year.

The Least Squares equation is the same as the basic model presented in Equation 1 except that we have introduced a dummy team, X_0, that each team plays once. Depending on what type of start-of-season ratings you were using, you would initialize the starting ratings as in Equation 9.

3.1.1.3 Home Edge. In the basic model there is no distinction made between games played on a team's home court versus games played on a neutral court. Even casual observers of sports acknowledge that it makes a difference where a game is played. Researchers have used a home edge term extensively when rating sports teams because the home edge term does makes a difference. In their 1994 article, "The Home-Court Advantage: How Large is it, and Does it Vary From Team to Team?," Harville and Smith (5) used the 1991-1992 Men's College Basketball season to study the home-court advantage. They found that a team does have a home-court advantage, but there isn't much advantage in using a home edge term for each team versus one home edge term for all teams. "The effect of team-to-team differences in the home-court advantage was found to be relatively small." Harville and Smith [1994]

In this research, three home edge scenarios were considered:

- *None: No Home Edge term*
- *Average Home Edge: One Home Edge term for all teams updated after each game*
- *Adjusted Average Home Edge: One Home Edge term for all teams updated after each game and adjusted by the difference in average home team's ratings and the average away team's ratings.*

The **Average Home Edge**, H, is calculated as:

$$H = \frac{\sum_{g(i,j)}[\mathcal{A}_{ij}]}{\mathcal{K}} \tag{10}$$

where
$g(i,j)$ is game between team i and j
$\mathcal{A}_{ij}$ is team i's adjusted margin of victory against team j (Equation 7)
$\mathcal{K}$ is the total number of games played so far.

The **Adjusted Average Home Edge**, $\mathcal{H}$, is calculated as:

$$\mathcal{H} = \frac{\sum_{g(i,j)}[\mathcal{A}_{ij}]}{\mathcal{K}} - \left[\frac{\mathcal{X}_h}{\mathcal{K}} - \frac{\mathcal{X}_a}{\mathcal{K}}\right] \tag{11}$$

where
$\mathcal{K}$ is the total number of games played so far
$\mathcal{A}_{ij}$ is team i's adjusted margin of victory against team j (Equation 7).
$\mathcal{X}_h$ is the home team's rating prior to this game
$\mathcal{X}_a$ is the away team's rating prior to this game.

How do we incorporate the home edge term into the basic Least Squares model in Equation 1? In a home game, the home edge probably accounts for a few more points for the home team over the away team, whereas on a neutral court,

neither would have the benefit of a home edge. Hence, we would make the home edge term zero for games played on neutral courts. We will use an indicator variable, $I(i,j) = 1$ if the game is played on team i's home court, $I(j,i) = -1$, and $I(i,j) = 0$ for a neutral court.

The Least Squares model from Equation 1 would take this form:

$$\min \sum_{\forall g(i,j)} [(I(i,j)H + X_i - X_j) - A_{ij}]^2 \tag{12}$$

where

$g(i,j)$ is game between team i and j

$I(i,j) = 1, -1, 0$ indicates whether game is home, away, or neutral

H is average home edge term (Equation 10)

X_i is team i's rating

A_{ij} is team i's margin of victory against team j.

If you wanted to use the adjusted average home edge term ($\mathcal{H}$) instead of the average home edge term (H), you would simply use $\mathcal{H}$ instead of H in Equation 12.

3.1.1.4 Time Discounting. The notion that "recent games should be given more weight than games played earlier during the season" is referred to as **Time Discounting**. To introduce time discounting to the Least Squares model, all we need to do is place a constant raised to a power, which reflects how long ago the game was played, in front of the Least Squares summation. Equation 14 illustrates how the basic Least Squares model (Equation 1) would be changed to account for time discounting.

$$\min \sum_{\forall g(i,j)} \alpha^{k_i} [(X_i - X_j) - A_{ij}]^2, \quad 0.00 < \alpha \leq 1.00 \tag{13}$$

where

α is a constant $0.00 < \alpha \leq 1.00$

α^{k_i} is the constant raised to a factor $k_i = 0 \ldots c_i$

c_i is the number of games team i has played.

$g(i,j)$ is game between team i and j.

Or,

$$\min \sum_{\forall g(i,j)} \alpha^{k_i}[(X_i - X_j) - A_{ij}]^2, \quad 0.00 < \alpha \leq 1.00 \tag{14}$$

The factor is one if this is team i's most recent game; $k_i = 0$, so $\alpha^{k_i} = \alpha^0 = 1$. The factor is α if this was team i's previous game ($k_i = 1$), and the factor equals α^{c_i} if this was team i's first game of the season ($k_i = c_i$).

In this research, four scenarios were considered: 1) $\alpha = 1.00$, no time discounting (i.e. all games have equal importance), 2) $\alpha = 0.95$, 3) $\alpha = 0.90$, and 4) $\alpha = 0.85$. In basketball, if $\alpha = 0.95$ and a team has played 25 games, $k_i = 25$, then team i's first game of the season is weighted at 0.277, while its 25th game has weight 1.000.

3.1.2 Least Squares model with All Enhancements. In the previous section, each time an enhancement was introduced I showed what the basic Least Squares would look like when you added the enhancement. In practice, you may choose to use no enhancements or a combination of these enhancements. The Least Squares model using all these enhancements takes this form:

$$\min \sum_{\forall g(i,j)} \alpha^{k_i}[(I(i,j)H + X_i - X_j) - \mathcal{A}_{ij}]^2 \tag{15}$$

where

α is a constant $0.00 < \alpha \leq 1.00$

α^{k_i} is the constant raised to a factor $k_i = 0 \ldots c_i$

c_i is the number of games team i has played.

$g(i,j)$ is game between team i and j

$I(i,j) = 1, -1, 0$ indicates whether game is home, away, or neutral

H is average home edge term (Equation 10)

X_i is team i's rating

$\mathcal{A}_{ij}$ is team i's margin of victory against team j.

This model uses the dummy team, X_0, that all teams play in their first game. Depending on what type of start-of-season ratings you were using, you would set the starting ratings, $g(0,i)\forall_i$, as described previously in the subsection *Start-of-Season Ratings.* If you wanted to use the adjusted average home edge term ($\mathcal{H}$) instead of the average home edge term (H), you would simply use $\mathcal{H}$ instead of H in Equation 15.

In the next section, I show that to ensure that the solution to the system is unique you also need to set the rating of the dummy team, $X_0 = 100.00$.

3.1.3 Solution to System of Equations. In this subsection, I first show that the Least Squares model with all the enhancements (Equation 15) has a unique solution and then talk about properties of its matrix that makes it easier to solve.

The underlying graph connection matrix for the Least Squares model is a directed graph because each game $g(i,j)$ represents two directed arcs connecting nodes i and j; one arc is directed from node i to j, while the other arc is directed from node j to i. Furthermore, the directed graph is strongly connected because for each pair of nodes i and j, there exists a directed path from i to j. [Definition 1.6, Varga (44)] We can show this path exists because this model has a dummy team 0 that each team plays once. Hence, we can find a directed path from i to j going through the dummy team: $\overrightarrow{P_iP_{l_0}}$, $\overrightarrow{P_{l_0}P_{l_j}}$. Strongly connected implies that the

system is irreducible (i.e. has a solution). [Theorem 1.6, Varga (44)] Finally, because we set $X_0 = 100.00$, we can also say the system has a unique solution.

As stated earlier in this chapter, the matrix representing this system of equations is sparse. Noble and Daniel (34) describe alternative methods to Gaussian-elimination programs for sparse matrices: "Among the most powerful of these methods are *iterative* methods: Rather than compute the solution directly as in Gauss elimination, they compute a (theoretically infinite) sequence of approximate solutions $\mathbf{x}_r$ intended to converge rapidly to the solution."

Gauss-Seidel is the matrix iterative method used in this research. Noble and Daniel's (34) description of Gauss-Seidel is the following:

> The *Gauss-Seidel* iterative method substitutes the new approximation $\mathbf{x}'$ into the ith equation for those variables $x'_1, \ldots, x'_{i-1}$ that have been updated and substitutes the old approximation $\mathbf{x}$ for all other variables but the ith and solves for that variable as x'_i :

$$a_{ii}x'_i = -a_{i1}x'_1 - \cdots - a_{i,i-1}x'_{i-1} - a_{i,i+1}x_{i+1} - \cdots - a_{ip}x_p + b_i$$

$$\text{for } 1 \leq i \leq p.$$

Two additional advantages of this model are 1) fast convergence due to good starting solution and 2) the problem size does not grow with the amount of games, instead the problem size depends on the number of teams. When new games are played, new solutions can be obtained quickly because the previous solution is a good starting point. Hence, quick convergence. Regardless of the number of games played, the system of equations is a system of $N + 1$ equations with $N + 1$ unknowns. The model is therefore suitable for sports such as college football, where there are over 200 teams playing approximately 12 games per season, as well as college basketball, where over 300 teams play 25-30 games per season.

3.2 Mean Absolute Deviation

The rationale for using a **Mean Absolute Deviation** model is that unlike Least Squares models, they are less sensitive to outliers. The Mean Absolute Deviation model finds ratings by minimizing the forecasting error for all games:

$$\textit{Minimize}$$

$$\sum_{g(i,j)} |(X_i - X_j) - A_{ij}| \tag{16}$$

$$\tag{17}$$

where

$g(i,j)$ is game between team i and j

X_i is team i's rating

A_{ij} is team i's margin of victory against team j.

If we call the above objective function F, F can be rewritten as:

$$F = \sum_{X_i - X_j > A_{ij}} [X_i - X_j - A_{ij}] - \sum_{X_i - X_j < A_{ij}} [X_i - X_j - A_{ij}] \tag{18}$$

And F is minimized when:

$$\frac{\partial F}{\partial X_i} = \sum_{X_i - X_j > A_{ij}} 1 - \sum_{X_i - X_j < A_{ij}} 1 \tag{19}$$

This indicates that Equation 16 is minimized when the model over-predicts half of team i's games and under-predicts half of team i's games.

From Linear Programming theory, this minimization problem (Equation 16) can be transformed to a classic linear program:

Minimize

$$\sum_{g(i,j)} E_{ij} \tag{20}$$

subject to

$$E_{ij} \geq X_i - X_j - A_{ij}$$
$$E_{ij} \geq -X_i + X_j + A_{ij} \tag{21}$$

where

$g(i,j)$ is game between team i and j

E_{ij} is the error for the game between team i and team j

X_i is team i's rating

A_{ij} is team i's margin of victory against team j.

Similar to the Least Squares model, we add a dummy team, X_0, that each team has played once in their *0-th* game of the season. The value of A_{0j} depends on whether the model is using starting ratings or not. In the case of no starting ratings, $A_{0j} = 0$.

To guarantee that the system can have a unique solution[2], the value of dummy team is set to 100.00, $X_0 = 100.00$. This just adds another constraint to Equation 20:

Minimize

$$\sum_{g(i,j)} E_{ij} \tag{22}$$

[2]the MAD model can have non-unique solutions, just as the median of a distribution is not unique when the sample size is an even number

subject to

$$E_{ij} \geq X_i - X_j - A_{ij}$$

$$E_{ij} \geq -X_i + X_j + A_{ij}$$

$$X_0 = 100.000 \tag{23}$$

where

$g(i,j)$ is game between team i and j

E_{ij} is the error for the game between team i and team j

X_i is team i's rating

A_{ij} is team i's margin of victory against team j.

3.2.1 Enhancements. The same four enhancements [Scaling of Differences, Start of Season Ratings, Home Edge, and Time Discounting] used in the Least Squares models were used for the Mean Absolute Deviation models.

3.2.1.1 Scaling of Differences. Similar to the Least Squares approach, in order to use adjusted winning margins instead of actual winning margins, we simply replace $\mathcal{A}_{ij}$ (Equation 7) for A_{ij} in the basic Mean Absolute Deviation model. The modified model is:

Minimize

$$\sum_{g(i,j)} |(X_i - X_j) - \mathcal{A}_{ij}| \tag{24}$$

(25)

where

$g(i,j)$ is game between team i and j

X_i is team i's rating

A_{ij} is team i's adjusted margin of victory against team j.

3.2.1.2 Start-of-Season Ratings. To use Start-of-Season Ratings, as in Least Squares, we would use Equation 9 to initialize the starting ratings of the teams (i.e. set the outcome of their game against the dummy team, X_0).

3.2.1.3 Home Edge. The Home Edge term from Equation 10 is incorporated to the basic Mean Absolute Deviation model by modifying Equation 16 in this manner:

Minimize

$$\sum_{g(i,j)} |I(i,j)H + (X_i - X_j) - A_{ij}| \tag{26}$$

(27)

where

$g(i,j)$ is game between team i and j

$I(i,j) = 1, -1, 0$ indicates whether game is home, away, or neutral

H is average home edge term (Equation 10)

X_i is team i's rating

A_{ij} is team i's margin of victory against team j.

The adjusted average home edge term, $\mathcal{H}$ (Equation 11), could be used instead of the average home edge term (H) by simply replacing $\mathcal{H}$ for H in Equation 26.

3.2.1.4 Time Discounting. As in Least Squares, we can let recent games carry more weight than games played earlier during the season by introducing a constant α^{k_i} that multiplies the absolute value term in Equation 16. The following equation illustrates the modification.

Minimize

$$\sum_{g(i,j)} \alpha^{k_i} |(X_i - X_j) - A_{ij}| \tag{28}$$

$$\tag{29}$$

where

$g(i,j)$ is game between team i and j

α is a constant $0.00 < \alpha \leq 1.00$

α^{k_i} is the constant raised to a factor $k_i = 0 \ldots c_i$

c_i is the number of games team i has played.

X_i is team i's rating

A_{ij} is team i's margin of victory against team j.

3.2.2 Mean Absolute Deviation model with All Enhancements. Equation 30 shows how the basic Mean Absolute Deviation model can be modified to use all enhancements.

Minimize

$$\sum_{g(i,j)} \alpha^{k_i} |I(i,j)H + (X_i - X_j) - \mathcal{A}_{ij}| \tag{30}$$

$$\tag{31}$$

where

$g(i,j)$ is game between team i and j

α is a constant $0.00 < \alpha \leq 1.00$

α^{k_i} is the constant raised to a factor $k_i = 0 \ldots c_i$

c_i is the number of games team i has played.

$I(i,j) = 1, -1, 0$ indicates whether game is home, away, or neutral

H is average home edge term (Equation 10)

X_i is team i's rating

$\mathcal{A}_{ij}$ is team i's adjusted margin of victory against team j.

To use the adjusted average home edge term ($\mathcal{H}$) instead of the average home edge term (H), substitute $\mathcal{H}$ for H in Equation 30. Each team plays the dummy team, X_0, once during the season. You would set the outcome of the game between team i and the dummy team depending on what type of start-of-season ratings you are using. See subsection *Start-of-Season Ratings* for more information.

3.2.3 Solution to Linear Program. The traditional Linear Program in Equation 20 can be solved with any software program that solves linear programs. In this case, the software **CPLEX** [3] was used. Even in college basketball where there are more teams and more games played, the problem size is quite small for linear programming solvers, such as the aforementioned cplex. If we look at the scenario where there are exactly 300 teams and each team plays 30 games, there are at most 4500 ((300 * 30)/2) unique games. The linear program associated with this scenario would have 4800 (300 for each team + 4500 for each game) variables and 9000 constraints (two for each game). A Sun Sparc 2, which by today's standards is a relatively slow machine, running cplex did not have much difficulty solving these problems.

3.2.4 Data Collection. I collected the 30 years of data used in this research from the National Collegiate Athletic Association's (NCAA) Records Books for Football, Men's Basketball, and Women's Basketball[4]. Ten years of

[3] CPLEX^{TM} Linear Optimizer

[4] The 1996 Official NCAA Basketball Records Book was the last joint publication covering both Men's and Women's Basketball. Starting in 1997, the NCAA began publishing separate Men's and Women's Basketball Records Books. Also, the 1982 season was the first season that Women's Basketball was played under the umbrella of the NCAA. Therefore, prior Records Books did not include Women's Basketball.

Football data were for the 1987-1996 seasons, while in Men's and Women's Basketball it was for the 1988-1997 seasons[5]. I used separate procedures to gather Football and Basketball data.

In football, the NCAA lists a schedule by date for the current season. Therefore, to gather the results for the 1987 season you first enter schedules by date using the 1987 Records Book, then use the 1988 Records Book to enter the team-by-team results. Obviously, it would have been easier to enter the data if the results were also reported by date, as opposed to only team-by-team results. To check the data, I tally both Conference and Overall Win-Lost records and compare these to the Conference Standings the NCAA reported in the 1988 Records Book. A difficulty when trying to merge these two data sets was that team schedules might change after the Records Books were printed. Therefore, the team-by-team results ordering would not always match up with the schedule. The Records Books I used were: 1987 NCAA Football (10), 1988 NCAA Football (12), 1989 NCAA Football (14), 1990 NCAA Football (16), Official 1991 NCAA Football (18), Official 1992 NCAA Football (20), Official 1993 NCAA Football (22), Official 1994 College Football Records Book (24), Official 1995 College Football Records Book (26), Official 1996 College Football Records Book (28), and Official 1997 College Football Records Book (31).

For basketball, the process was slightly more difficult because the NCAA did not use to publish a schedule by date. Therefore, instead of starting with schedules by date, I had to start with team-by-team results. It would not have been any easier to start with the schedules as I did in Football because I would still have to work twice: from team-by-team schedules and results. The only advantage of working with team-by-team results first was that the results were supposedly in correct order. As I mentioned before, changes can occur after printing of the

[5]In football, 1987 season refers to football played Fall 1987 and ending January 1988. For Men's and Women's Basketball, the 1988 season corresponds to basketball played during the Fall of 1987 and Spring of 1988.

Records Book containing the schedules. By working from team-by-team results [without dates], I did not have dates associated with results. Sometimes an entire conference would make changes in their schedule, so there were six to nine teams whose results did not match up with their schedule. I tried to make changes as best I could to match the schedules, results, and conference standings. Sometimes, though, I just had to make arbitrary decisions to make these match up. Similar to football, to obtain one year of records for each sport, I had to use two consecutive Record Books. For example, to obtain the 1988 Women's Basketball schedule, it was necessary to enter the 1988 results [without dates] from the 1989 Basketball Record Book, then use the 1988 Basketball Record Book to associate dates to the games. The final step was to check both the Conference and Overall Win-Loss Records in the 1989 Basketball Record Book. If I found any discrepancies between the calculated and the listed Win-Loss, I needed to find the source of the mistake. Most times, the calculated Win-Loss was wrong because the entered dates were incorrect[6], other times, there was simply an error in the Record Book. The data came from these Records Books: 1988 NCAA Basketball (11), 1989 NCAA Basketball (13), 1990 NCAA Basketball (15), 1991 NCAA Basketball (17), Official 1992 NCAA Basketball (19), Official 1993 NCAA Basketball (21), Official 1994 NCAA Basketball (23), 1995 Official College Basketball Records Book (25), Official 1996 College Basketball Records Book (27), Official 1997 NCAA Men's College Basketball Records Book (29), Official 1997 Women's College Basketball Records Book (30), Official 1998 Men's College Basketball Records Book (32), and Official 1998 Women's College Basketball Records Book (33).

3.3 Summary

Least Squares and Mean Absolute Deviation are the two approaches used in this research to find team ratings that best explain the game results observed in a

[6]Two teams might have listed different games for the game.

season. Four enhancements (Scaling of Differences, Start-of-Season Ratings, Home Edge, and Time Discounting) were considered. I implemented 87 out of a possible 240 combinations of the enhancements. For each method, I showed how to obtain a numerical solution to each problem: Gauss-Seidel (Least Squares) and any Linear Programming solver (Mean Absolute Deviation). In the next chapter, I analyze the results to see which combination of enhancements were "best" for each of the three different sports.

Chapter IV. Results

In this research, game results of three NCAA sports–Football, Men's Basketball, and Women's Basketball–were used to find a set of Ratings for each sport that best explained those game results. Two types of models with various sets of enhancements were considered: Least Squares (L.S.) and Mean Absolute Deviation (M.A.D.). In all three sports, the most accurate L.S. model outperformed the most accurate M.A.D. model in terms of accuracy. The most accurate model in Football predicted game results 72.74% accurately, in Men's Basketball 74.61%, and in Women's Basketball 78.90%. Table 3 shows the enhancements used by the most accurate models.

Table 3 1989-1997 Most Accurate L.S. and M.A.D. Cumulative Models

	Football		**Men's Basketball**		**Women's Basketball**	
Enhancements	*L.S.*	*M.A.D.*	*L.S.*	*M.A.D.*	*L.S.*	*M.A.D.*
Starting Ratings Regressed to Mean	√	√ 0.95	√ 0.90	√ 0.90	√ 0.90	√ 0.90
Adjusted Average Home Edge	√	√	√	√	√	√
Time Discounting	0.95		0.95			
Scaling of Differences		0.50			0.75	0.90
Accuracy	72.74%	71.20%	74.61%	73.84%	78.90%	78.12%

Over the nine year span[1], both Women's Basketball models were more accurate than the corresponding Football and Men's Basketball models. Table 3 shows that Women's Basketball's cumulative accuracy was in the high 70s, while Men's Basketball was in the mid-70s, and Football was in the low 70s. In the following chapter, I will take a closer look at the differences in accuracy and the possible reasons for these differences.

[1]Football 1988-1996, Men's and Women's Basketball 1989-1997. Football 1988 refers to football starting August 1988 and ending January 1989. Men's and Women's Basketball 1989 refers to basketball starting Fall 1988 and ending Spring 1989.

An Adjusted Average Home advantage and Starting Ratings were enhancements that were common in all most accurate models. In five of these six most accurate models, the Starting Ratings were regressed to the mean; only for L.S. Football were the Starting Ratings not regressed to the mean. For both Men's and Women's Basketball, the regressed factor was 0.90.

The other two types of enhancements considered in this study were Time Discounting of early vs. late games and Scaling of Differences in game scores. Time discounting was only important for L.S. Football and Men's Basketball. In three of the six (M.A.D. Football, L.S. Men's Basketball, and L.S. Women's Basketball) models, adjustments were made to the winning margin, although all three used different factors: 0.50, 0.75, and 0.90, respectively. Women's Basketball was the only sport for which time discounting didn't appear in the set of enhancements of the two most accurate models.

A look at each sport shows that in Women's Basketball the most accurate L.S. and M.A.D. models were most similar; they differed only in the adjustment factor to the winning margin, 0.75 and 0.90, respectively. The L.S. and M.A.D. models in Men's Basketball were also very similar, except that the L.S. model also used Time Discounting of games by a 0.95 factor. In Football, the most accurate L.S. and M.A.D. models were different in that L.S. used a Time Discounting factor of 0.95 while the M.A.D. model scaled the differences in scores by a 0.50 factor.

In the next sections of this chapter, I will summarize[2] the procedure used to obtain the most accurate model in each sport, then for each sport I will report the findings for both L.S. and M.A.D. models, followed by a Conclusions section.

[2]For a detailed description see Chapter III

4.1 Introduction

To find the rating system that is most accurate for a sport, I considered several enhancements to these models: home edge term, adjustments to the winning margin, time-based weighting, and start of season ratings. In Table 2, I summarized the enhancements (and their respective values) I implemented in this research. For the home edge term, the models were run with three types of home edge terms: no home edge, an average home edge, and an adjusted average home edge term. Another change I made to the basic L.S. model was to add a "dummy team" with a fixed rating of 100.00 that every team played. This ensures that the system of linear equations has a solution. To avoid the effects of outliers, in addition to using the actual winning margins, I also made runs where the winning margins were raised to a power (0.90, 0.75, and 0.50) and where instead of using the winning margins, I simply assigned +1/-1. The time-based weighting gave less weight to early games by factors of 0.95, 0.90, and 0.85. To address the problem of starting each season with a clean slate, and therefore not having much predictive ability in the early season, I also used the previous year's Ratings as Starting Ratings for the current year, and regressed the previous years' Ratings by factors of 0.95 and 0.90 to the mean.

Finally, to select the best set of enhancements for a given method during the studied years, I calculated the cumulative accuracy for each set of enhancements. The set with the highest accuracy over the nine year span is the best set of enhancements for the given model. To determine the best method for a sport, you would then compare the best model for both L.S. and M.A.D.

4.2 College Football

4.2.1 Least Squares. In terms of accuracy, the best set of enhancements for Football during the 1988-1996 seasons was an adjusted average home edge advantage, Starting Ratings, and 0.95 time discounting. Time discounting indicates

that giving more recent games more weight over earlier games was significant for Football. The cumulative accuracy for this model was 72.74% when predicting 9948 games.

For all L.S. and M.A.D. models per sport, I have included yearly accuracy figures for all sports and their 87 different runs in Appendix B. The final team-by-team ratings for the most accurate model can be found in Appendix C.

Table 4 shows that over nine seasons, the most accurate L.S. model consistently was around 72-73% accurate, attaining a high of 74.26% in 1995 and a low of 70.58% during 1994. The average absolute error (a.a.e.) of this model was also very consistent over the nine year period.

Table 4 1988-1996 L.S. Football Yearly Summary Results

Season	*Games*	*Accuracy*	*a.a.e.*	*L.S. #1*	*Rating*	*AP #1*
1988	1042	73.03%	13.01	Florida St.	141.8641	Notre Dame
1989	1043	72.87%	12.10	Houston	148.0828	Miami (Fla.)
1990	1046	72.18%	13.22	Miami (Fla.)	142.5047	Colorado
1991	1057	73.32%	13.23	Washington	149.2265	Miami (Fla.)
1992	1049	72.64%	12.55	Florida St.	142.6583	Alabama
1993	1161	72.70%	13.12	Florida St.	151.0616	Florida St.
1994	1166	70.58%	13.07	Penn St.	147.6439	Nebraska
1995	1185	74.26%	13.31	Nebraska	159.9063	Nebraska
1996	1199	72.89%	13.60	Nebraska	155.3916	Florida

4.2.2 Mean Absolute Deviation. Unlike the L.S. model, time discounting was not one of the enhancements for the most accurate M.A.D. model in College Football, and the most accurate M.A.D. model was slightly less accurate (71.20%) than the L.S. model. Table 5 shows that the M.A.D. model for College Football has the lowest a.a.e. of all models. The best set of enhancements over the span of 1988-1996 was an adjusted average home edge term, Starting Ratings regressed to the mean by a factor of 0.95, and winning margins adjusted to the power(0.50). The adjustment of the winning margin to 0.50 indicates that blowouts had to be accounted for in the model.

Table 5 1988-1996 M.A.D. Football Yearly Summary Results

Season	*Games*	*Accuracy*	*a.a.e.*	*M.A.D. #1*	*Rating*	*AP #1*
1988	1042	71.88%	2.75	Florida St.	106.7974	Notre Dame
1989	1043	72.10%	2.56	Clemson	106.4813	Miami (Fla.)
1990	1046	69.98%	2.80	Miami (Fla.)	107.6650	Colorado
1991	1057	71.52%	2.69	Washington	107.0482	Miami (Fla.)
1992	1049	71.97%	2.66	Florida St.	107.1045	Alabama
1993	1161	70.46%	2.79	Florida St.	107.7095	Florida St.
1994	1166	69.38%	2.89	Miami (Fla.)	107.7956	Nebraska
1995	1185	72.07%	2.77	Florida	108.3942	Nebraska
1996	1199	71.56%	2.87	Nebraska	109.0151	Florida

There is less accuracy fluctuation year-to-year in the M.A.D. model than in the corresponding L.S. model. However, it never attains L.S.'s cumulative accuracy over nine years in a given year, much less the high water mark per year of 74.26% of L.S. during the 1995 season.

4.3 College Men's Basketball

In Men's Basketball, the seasons studied were 1989-1997, where the year indicates the year that a season ended. Therefore, the 1989 season refers to Men's Basketball played in Fall 1988 and Spring 1989.

4.3.1 Least Squares. The best set of enhancements in Men's Basketball was the same as in L.S. Football (adjusted average home edge term, Starting Ratings discounted by a factor of 0.90, and 0.95 time discounting) except that the Starting Ratings were regressed to the mean by a factor of 0.90 and Men's Basketball was more accurate at 74.61%. One should note that there are about three times more games played in Basketball than Football [therefore the matrix should be better connected], there are more teams, and the two are very different sports. Because Men's Basketball and Women's Basketball are more closely related they can be compared more readily. Similar to Football, the time discounting

indicates that it was better to give more weight to outcomes closer in time to the forecasted game.

Table 6 shows that Men's Basketball's accuracy is 1-2% higher than Football's. Both accuracy and a.a.e. seem to be fairly stable year-to-year in L.S. Men's Basketball.

4.3.2 Mean Absolute Deviation. For the M.A.D. model, the only set of enhancements used in the most accurate model was an adjusted average home edge term and Starting Ratings regressed to the mean by a 0.90 factor. Although this is a simpler model than the corresponding L.S. model, its predictive capability, 73.84%, was not as accurate as the L.S. model.

If we look at accuracy in M.A.D. model (Table 7) for Men's Basketball, the accuracy is about one percentage point lower than the corresponding L.S. model. For Men's Basketball, accuracy was more comparable in L.S. and M.A.D. as opposed to in Football where the differences in accuracy of the two models were larger.

Table 6 1989-1997 L.S. Men's Basketball Yearly Summary Results

Season	*Games*	*Accuracy*	*a.a.e.*	*L.S. #1*	*Rating*	*NCAA Champion*
1989	4144	74.90%	9.04	Arizona	127.1866	Michigan
1990	4149	74.67%	8.85	UNLV	126.5246	UNLV
1991	4223	74.43%	9.33	UNLV	130.0039	Duke
1992	4227	75.35%	9.22	Indiana	129.0758	Duke
1993	4081	74.96%	8.94	Kentucky	129.2505	N. Carolina
1994	4168	74.28%	9.18	Arizona	123.0893	Arkansas
1995	4177	74.77%	9.20	Kentucky	127.7726	UCLA
1996	4216	73.79%	9.53	Kentucky	132.7711	Kentucky
1997	4273	74.33%	9.43	Kentucky	128.1887	Arizona

Table 7 1989-1997 M.A.D. Men's Basketball Yearly Summary Results

Season	*Games*	*Accuracy*	*a.a.e.*	*M.A.D. #1*	*Rating*	*NCAA Champion*
1989	4132	73.72%	9.24	Arizona	125.3420	Michigan
1990	4140	74.54%	8.99	Oklahoma	122.8398	UNLV
1991	4219	74.14%	9.42	UNLV	126.8670	Duke
1992	4223	74.52%	9.39	Indiana	126.3644	Duke
1993	4078	73.91%	9.13	N. Carolina	127.5755	N. Carolina
1994	4155	73.62%	9.39	Kentucky	121.1432	Arkansas
1995	4172	73.92%	9.43	Kentucky	125.6677	UCLA
1996	4216	72.20%	9.73	Kentucky	127.6981	Kentucky
1997	4273	73.95%	9.51	Kentucky	126.3068	Arizona

4.4 College Women's Basketball

The same seasons studied in Men's Basketball were studied in Women's Basketball, 1989-1997.

4.4.1 Least Squares. Noteworthy from Table 8 is that in 1989 L.S. Women's Basketball achieves the highest accuracy mark (80.06%) of any one year, sport, or model in this study. This is the only accuracy figure for a single year to break the 80.00% mark. Also noteworthy is that the a.a.e. in the Least Squares model for Women's Basketball was the most consistent. The accuracy figures for L.S. Women's Basketball fluctuate more year-to-year compared to Men's Basketball models, but less than in Football.

In L.S. Women's Basketball during the 1989-1997 seasons, the best set of enhancements was an adjusted average home edge term, Starting Ratings regressed to the mean by a 0.90 factor, and winning margins adjusted to the power (0.75) with an accuracy of 78.90%. The adjustments to the winning margin indicate that running up the score distorted the L.S. ratings by causing many outliers. The a.a.e. was the most consistent of any model so far.

4.4.2 Mean Absolute Deviation. The most accurate M.A.D. model was very similar to the L.S. model. The two differed only in the factor the powers of

Table 8 1989-1997 L.S. Women's Basketball Yearly Summary Results

Season	*Games*	*Accuracy*	*a.a.e.*	*L.S. #1*	*Rating*	*NCAA Champion*
1989	3831	80.06%	4.21	Tennessee	118.0408	Tennessee
1990	3858	79.08%	4.29	Stanford	117.0735	Stanford
1991	3943	78.80%	4.49	Virginia	115.5598	Tennessee
1992	4028	79.07%	4.43	Virginia	116.5342	Stanford
1993	3938	77.83%	4.42	Tennessee	115.3905	Texas Tech
1994	4021	79.83%	4.42	Tennessee	115.9342	N. Carolina
1995	4081	79.22%	4.42	Tennessee	118.8393	Connecticut
1996	4121	78.50%	4.54	Tennessee	116.4210	Tennessee
1997	4142	77.81%	4.49	Stanford	116.9685	Tennessee

the winning margin were adjusted by, 0.90 for M.A.D., and 0.75 for L.S. The best set of enhancements for this model was an adjusted average home edge term, Starting Ratings regressed to the mean by a factor of 0.90, and the winning margins adjusted to the power (0.90).

Table 9 shows that the accuracy of M.A.D. Women's Basketball, as in other sports, was not as accurate as the corresponding L.S. model. Accuracy for this model was 78.12%. Like the two other sports, the L.S. and M.A.D. models agreed on the #1 rated teams in six of nine years.

Table 9 1989-1997 M.A.D. Women's Basketball Yearly Summary Results

Season	*Games*	*Accuracy*	*a.a.e.*	*M.A.D. #1*	*Rating*	*NCAA Champion*
1989	3826	79.14%	6.95	Tennessee	128.2699	Tennessee
1990	3851	78.40%	7.07	Stanford	127.3837	Stanford
1991	3936	78.81%	7.40	Virginia	125.0137	Tennessee
1992	4018	78.00%	7.29	Virginia	126.9215	Stanford
1993	3921	77.20%	7.38	Tennessee	125.3872	Texas Tech
1994	4012	79.09%	7.39	Penn St.	123.5877	N. Carolina
1995	4079	77.57%	7.40	Vanderbilt	130.8581	Connecticut
1996	4121	77.65%	7.50	Stanford	125.0459	Tennessee
1997	4142	77.28%	7.36	Stanford	126.8062	Tennessee

4.5 Summary

This chapter shows that for all three sports the most accurate L.S. model outperformed the most accurate M.A.D. model in terms of accuracy. The accuracy of the best Least Squares model was: 72.74% for Football, 74.61% for Men's Basketball, and 78.90% for Women's Basketball. Four types of enhancements were applied to the basic models: Home Edge, Scaling of Differences, Start-of-Season Ratings, and Time Discounting. In three of these four, new ways of modeling these enhancements were introduced: Adjusted Average Home Edge (Home Edge), quasi-Bayesian (Start-of-Season Ratings), and the Time Discounting enhancements. The Adjusted Average Home Edge was the most effective Home Edge term. Start-of-Season ratings were used in all most accurate models. Five out of these six also had the start-of-season ratings regressed to the mean.

The most accurate Women's Basketball model was more accurate by more than four percent than the most accurate Men's Basketball model. If Men's Basketball and Women's Basketball are primarily the same game, why is Women's Basketball that much more accurate than Men's Basketball? This, and others, are some of the issues I will consider in the next chapter.

Chapter V. Rating Applications

Chapter IV showed that the best Women's Basketball model (78.90%) was more accurate than the best Men's Basketball model (74.61%). Given that Men and Women play the same game except for certain rules, what causes these differences in accuracy? In the next section of this chapter, I will use Operating Curves to show that given a Predicted Winning Margin (P.W.M.) for a basketball game, Men's or Women's, the accuracy associated with that P.W.M. is virtually identical. What explains this difference in accuracy between Men's and Women's Basketball is that there are more "close" games played in Men's Basketball. I will then discuss depth and Strength of Schedule in Basketball and how they are closely tied to the number of "close games." Another application of rating systems is to evaluate the selection of basketball teams to both the Men's and Women's Basketball tournament. This can be done using three criteria: 1) rank correlation of the n teams selected to the tournament with the top n teams of the best rating system; 2) the "selection index" of the teams selected to the tournament; and 3) determining if the regions are evenly balanced. The next section uses the three evaluation methods for tournament selections to show what the 1993 Women's Basketball tournament bracket would look like had these three criteria been used to select and seed tournament teams. Other miscellaneous applications of rating systems are: Yearly Top 25 teams, Selecting the team of the decade for each sport, and How accuracy changes as the season progresses.

5.1 Differences in Accuracy of Men's and Women's Basketball

One way to compare Men's and Women's Basketball accuracy is to look at their Operating Curves for a given model. The Operating Curve shows the model's accuracy as a function of the Predicted Winning Margin (P.W.M.).

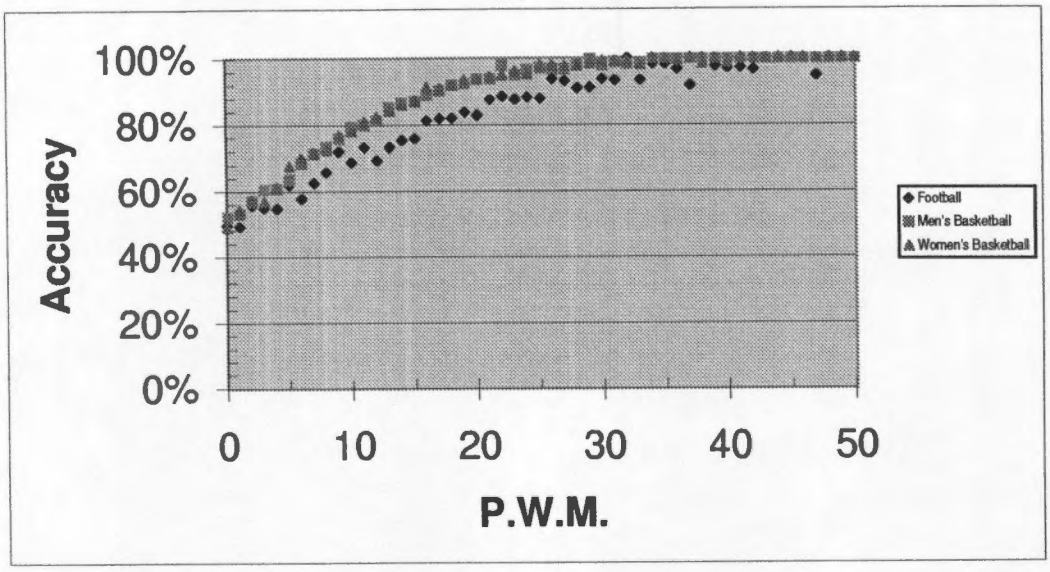


Figure 2 1989-1997* L.S. Operating Curves

Notes: * Years refer to academic years. Therefore, the year 1989 refers to Football played in 1988 and Men's and Women's Basketball played in 1988-1989.

5.1.1 Operating Curves in Basketball. I arbitrarily chose to compare Men's and Women's Basketball on a minimal set of enhancements: adjusted average home edge and Starting Ratings. Although this is a minimal set of enhancements, they are the basic set found in the best L.S. and M.A.D. models for all three sports. Therefore, this set gives us a good basis for comparing their Operating Curves. The Operating Curves for the best models would not have been comparable because they all used a different set of enhancements.

The Operating Curves for Men's and Women's Basketball for either L.S. (Figure 2, page 55) or M.A.D. (Figure 3, page 56), are virtually identical. This means that given a P.W.M. between two teams, either two men's teams or two women's teams, the higher ranked team will win by the accuracy associated with that P.W.M. If their Operating Curves are very similar, how do we explain that Women's Basketball games are predicted accurately around 80 percent of the time compared to a 75 percent accuracy for Men's Basketball?

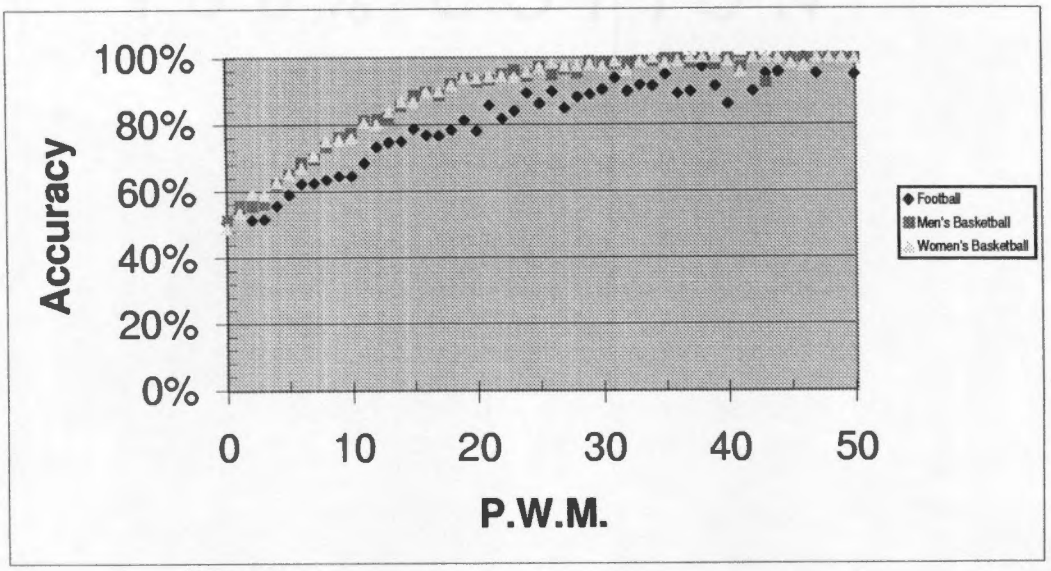


Figure 3 1989-1997* M.A.D. Operating Curves

Notes: * Years refer to academic years. Therefore, the year 1989 refers to Football played in 1988 and Men's and Women's Basketball played in 1988-1989.

The percentage of games played for each P.W.M. indicates that men's teams play more "close" games. By "close" games, I refer to games between teams whose P.W.M. is 10 points or less. The L.S. (Figure 4, page 57) and M.A.D. (Figure 5, page 57) graphs illustrate the Percentage of Games played per P.W.M. In Men's Basketball there are more games played where the P.W.M. is 10 points or less, while there are more Women's Basketball games played where the P.W.M. is between 10 and 40 points.

Quantifying the percentage of games played per P.W.M. ranges shows that there is a 12.25% difference in Men's and Women's Basketball at the 0-10 P.W.M. range in L.S., while in M.A.D. it is 12.52%. (The L.S. graph is Figure 6 on page 58 while the M.A.D. graph is Figure 7 on page 58.)

Given that the men are playing over 12 percent more of their games in the range that is most difficult to predict, it is not surprising that Men's Basketball has an accuracy rate five percent less than Women's Basketball.

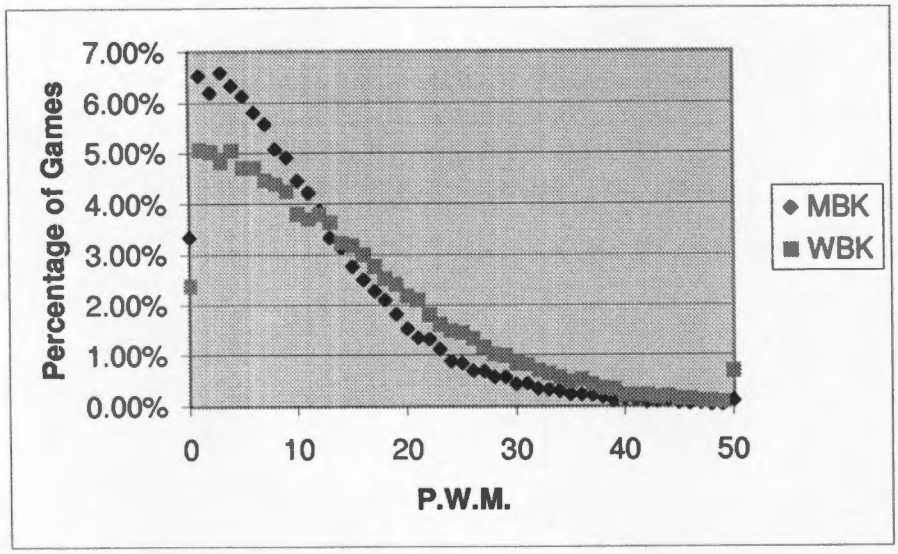


Figure 4 1989-1997 L.S. Percentage of Games per P.W.M. in Basketball

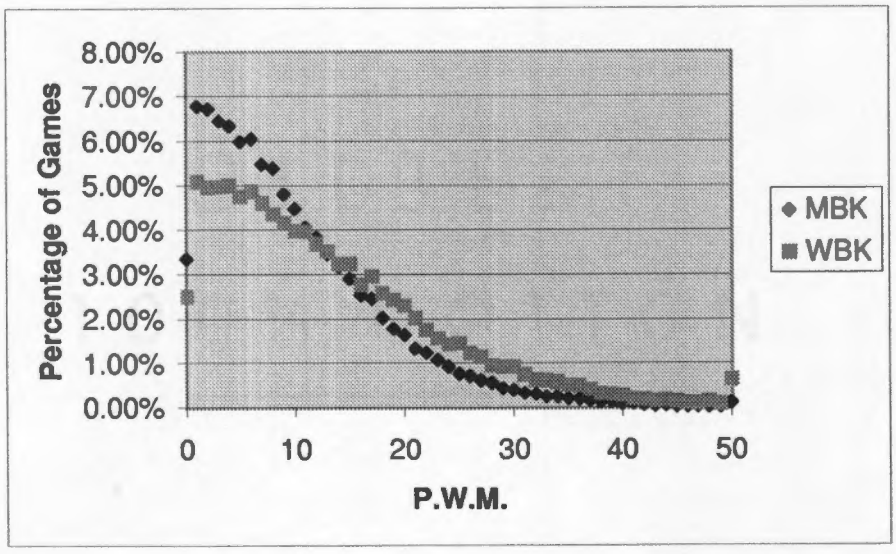


Figure 5 1989-1997 M.A.D. Percentage of Games per P.W.M. in Basketball

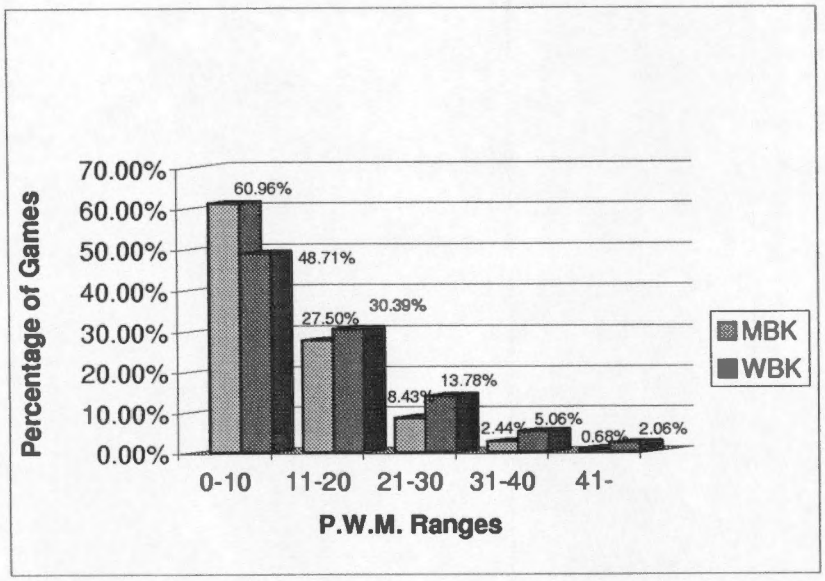


Figure 6 1989-1997 L.S. Percentage of Games per P.W.M. Ranges in Basketball

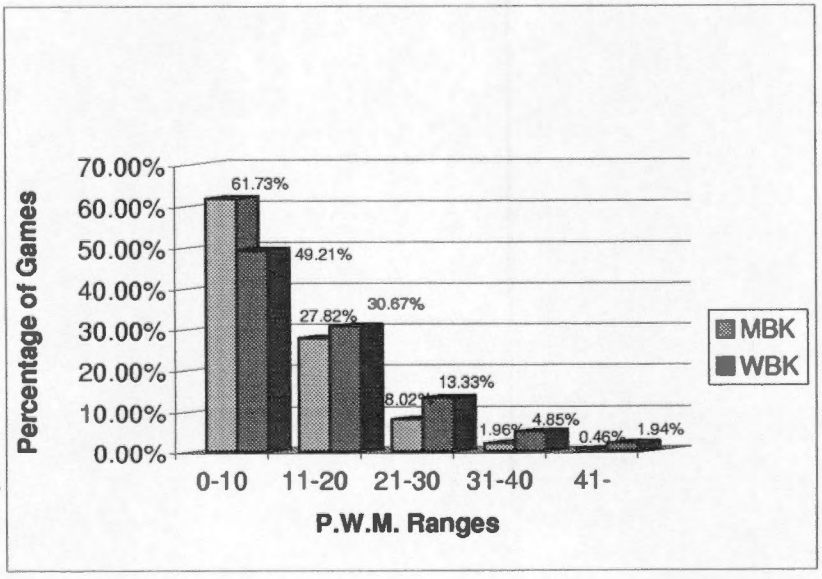


Figure 7 1989-1997 M.A.D. Percentage of Games per P.W.M. Ranges in Basketball

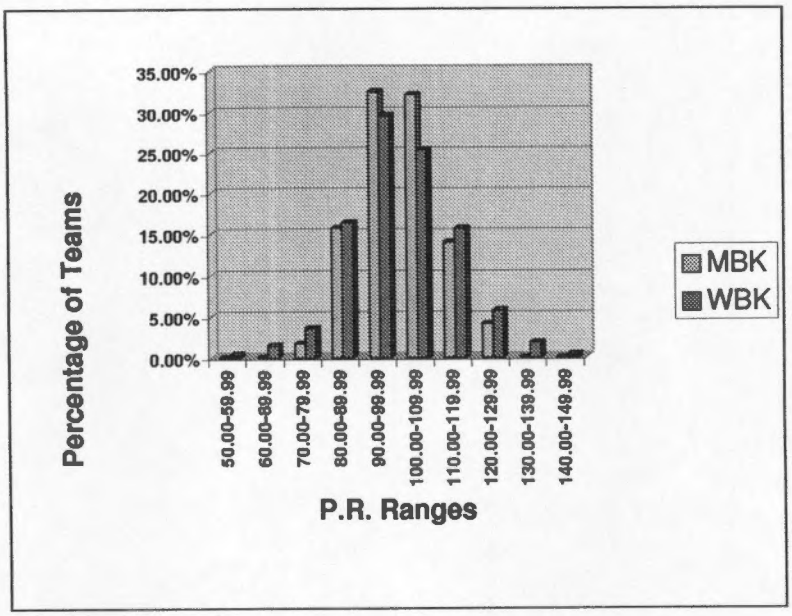
5.1.2 Depth and Strength of Schedule in Basketball. Why are there more "close" games being played in Men's Basketball? Do men's team purposefully play stronger schedules? Or, are the stronger schedules in the men's games a by-product of more depth in Men's Basketball?

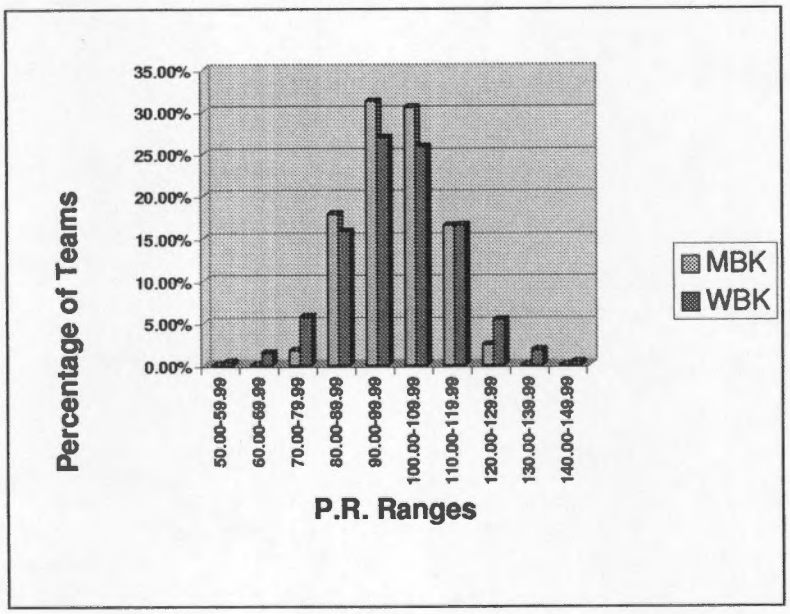
If we stop to think about it, a team's strength of schedule and its rating are closely related. Strength of schedule of teams in a rating system is not calculated until after the ratings are calculated in the system. However, a team's strength of schedule is also directly related to its opponents' strength of schedule. The two issues can't be separated. In fact, a team typically gains more, in terms of ratings, by losing to a strong team than by defeating a weak team.

Is there more depth in Men's Basketball? If we graphed the percentage of teams per Rating Ranges, we would expect a sport that has more depth to have higher percentages in the middle (near the mean), smaller percentages at the upper and lower rating ranges (tails), and for the majority of teams to be clustered near the mean. Let's take a look at the percentage of teams per a given rating range to see if we can verify this.

Both Figure 8 (Page 60) and Figure 9 (Page 65) show that men's teams' ratings tend to be clustered more closely to the mean, while the women's teams' ratings are more spread out, indicating more variation between the higher and lower rated teams. Therefore, this would seem to support the notion that there is more depth in Men's Basketball[1], which would also explain its higher number of close games, and perhaps its lower accuracy.

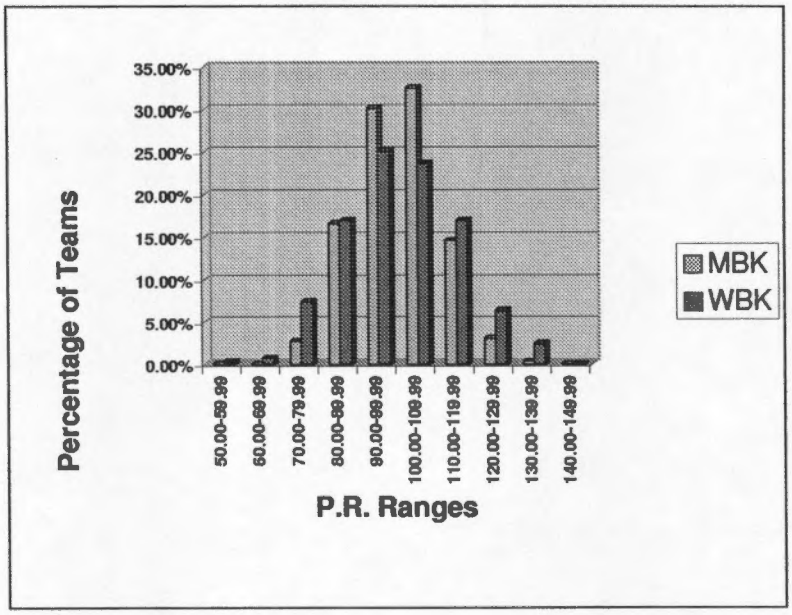
[1]Although this data supports the generally accepted notion that there is more depth in Men's Basketball, I would expect that as participation in Women's Basketball continues to grow from high school through college, its depth will also grow.

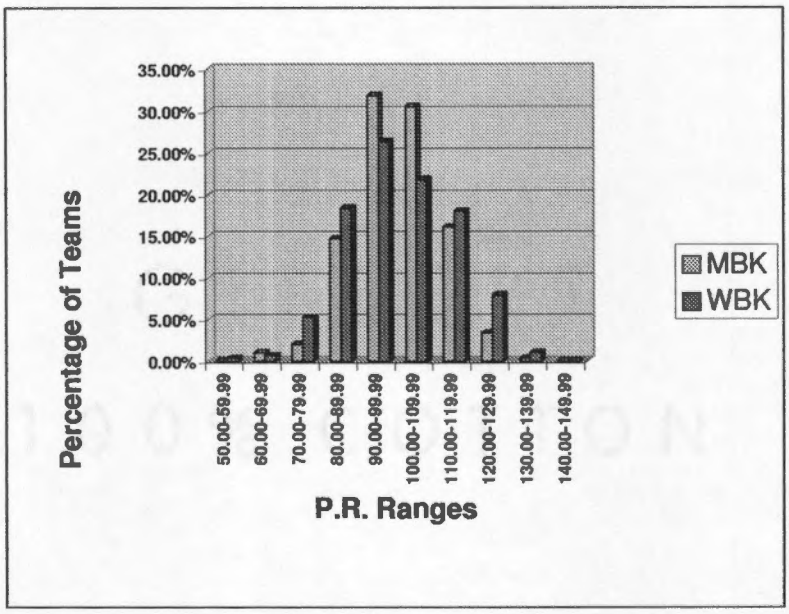




(b) 1990

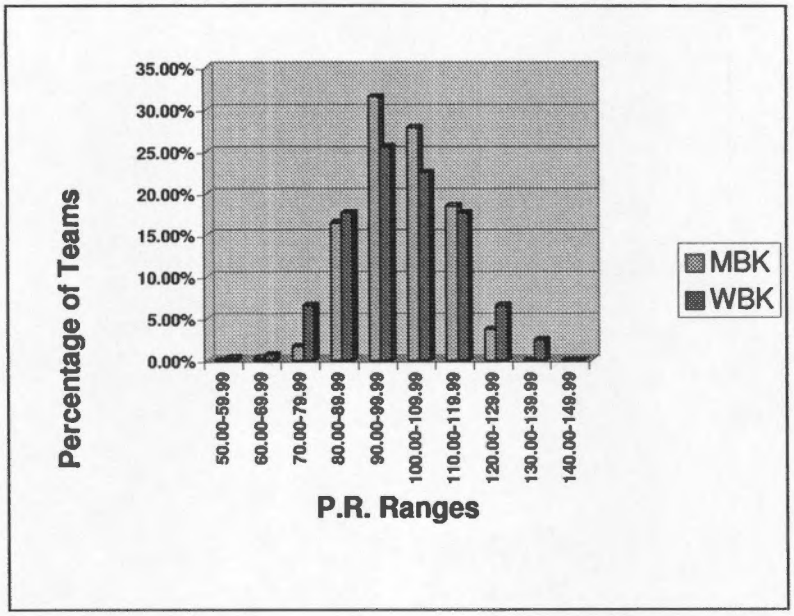
Figure 8 1989-1997 Percentage of Teams per Rating Ranges in L.S. Basketball

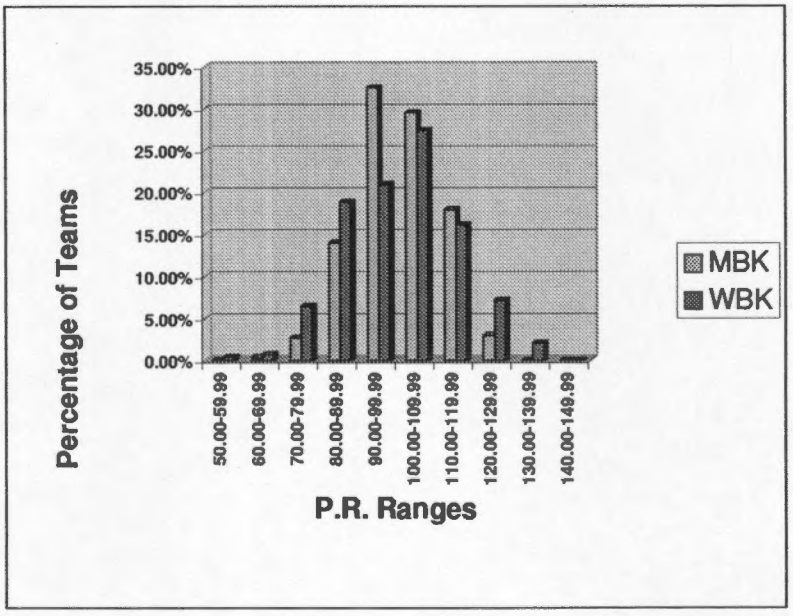




(d) 1992

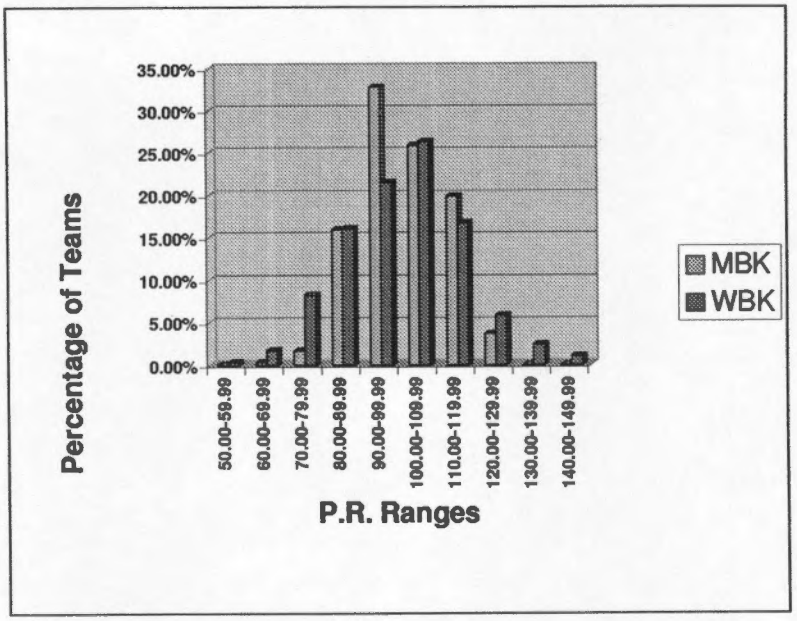
Figure 8 (continued) 1989-1997 Percentage of Teams per Rating Ranges in L.S. Basketball

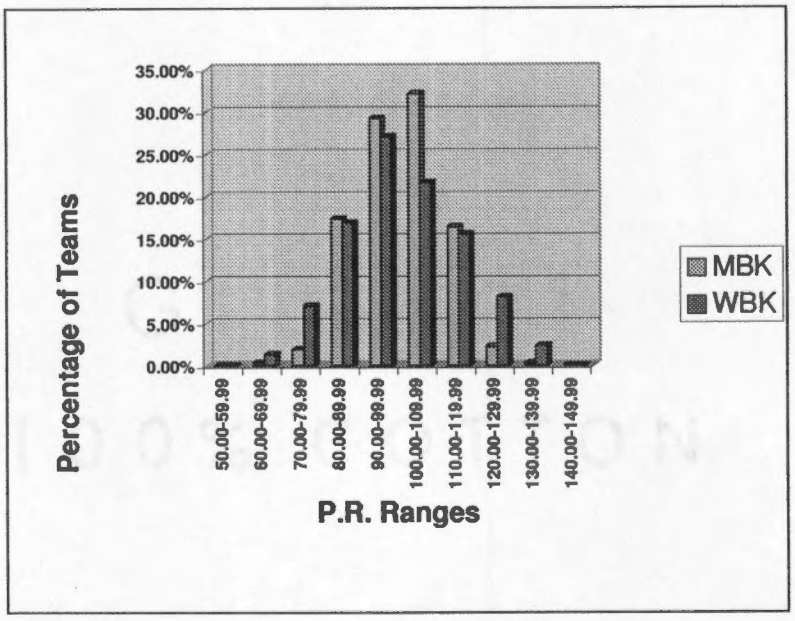




(f) 1994

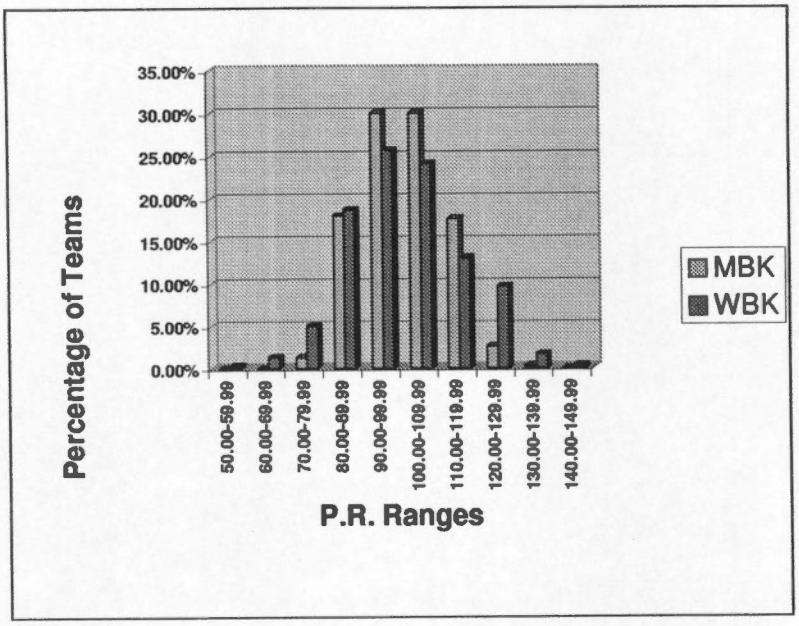
Figure 8 (continued) 1989-1997 Percentage of Teams per Rating Ranges in L.S. Basketball





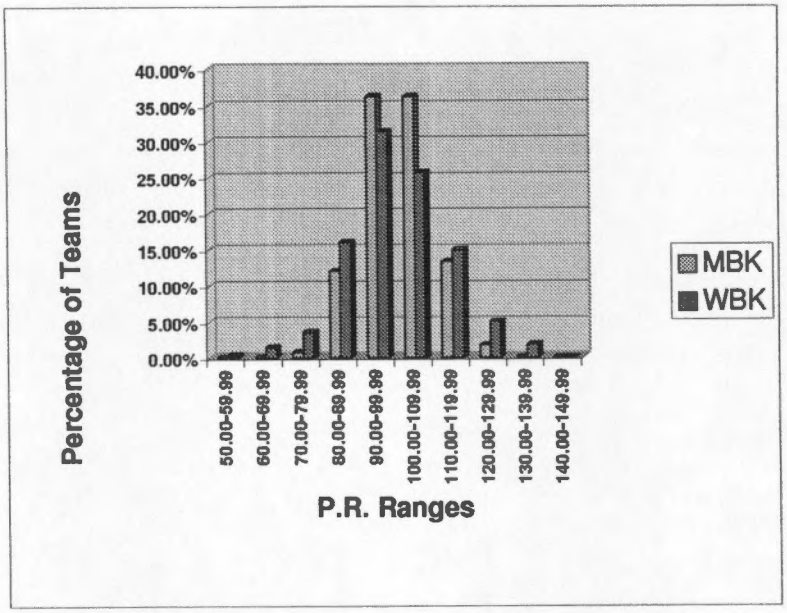
(h) 1996

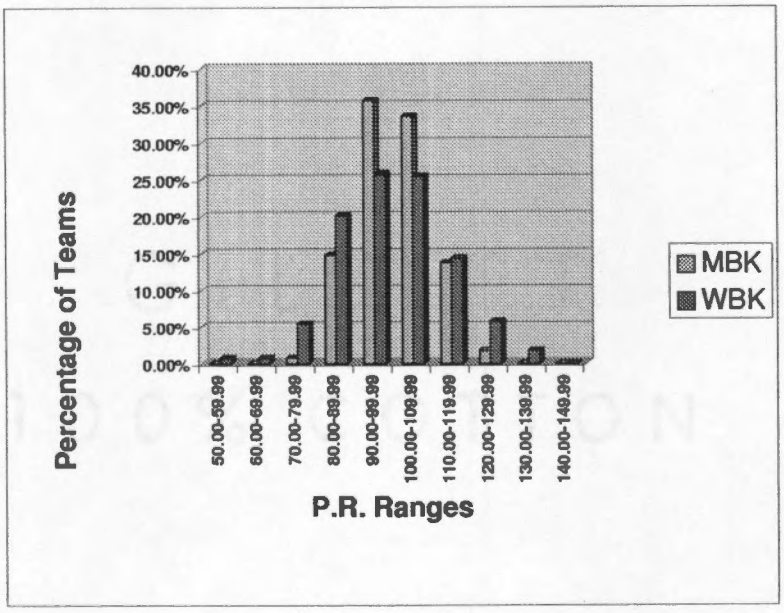
Figure 8 (continued) 1989-1997 Percentage of Teams per Rating Ranges in L.S. Basketball



(i) 1997

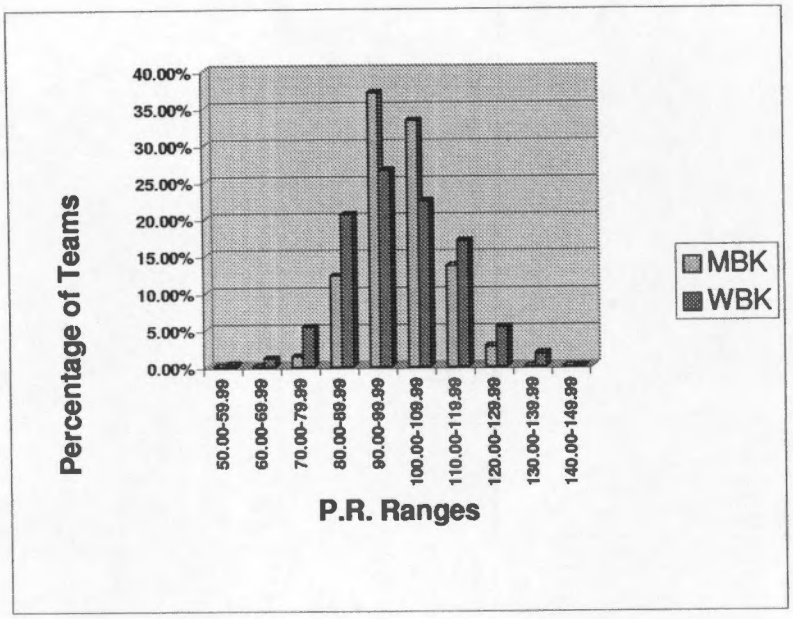
Figure 8 (continued) 1989-1997 Percentage of Teams per Rating Ranges in L.S. Basketball

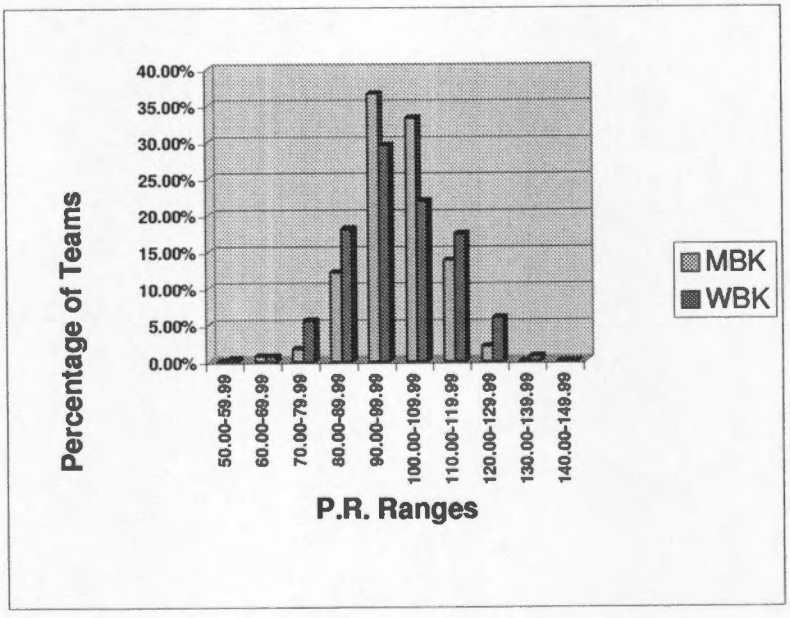




(b) 1990

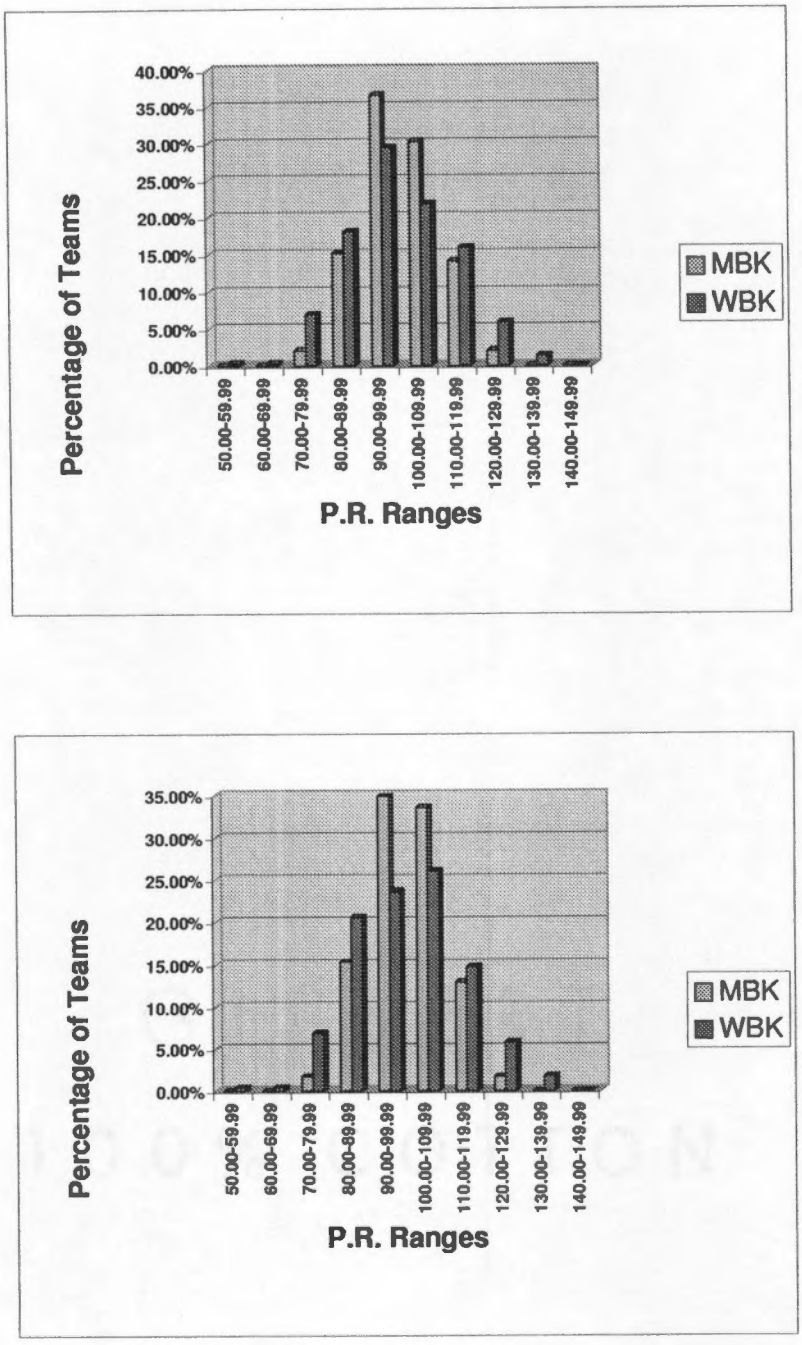
Figure 9 1989-1997 Percentage of Teams per Rating Ranges in M.A.D. Basketball





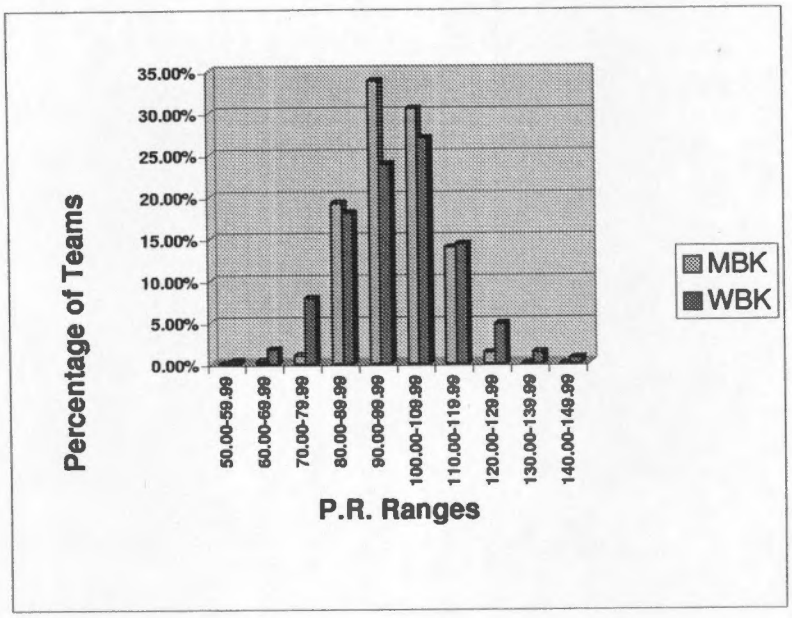
(d) 1992

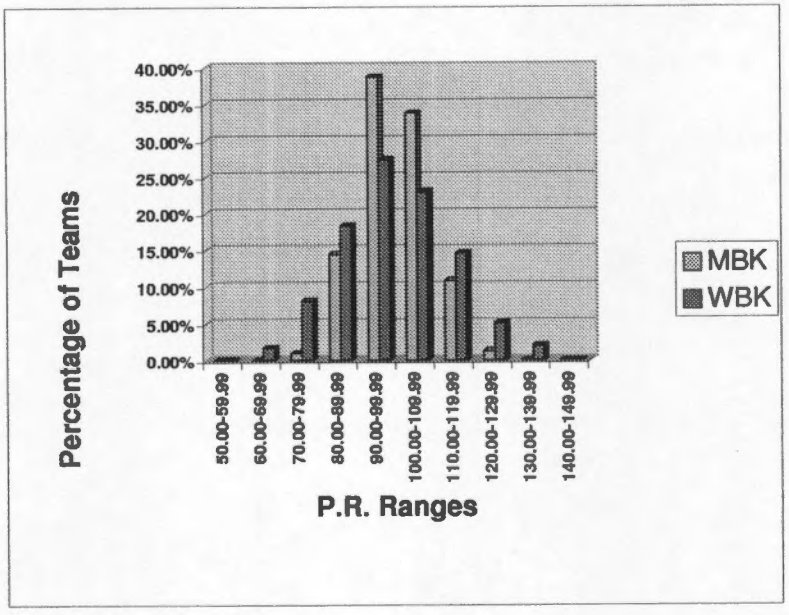
Figure 9 (continued) 1989-1997 Percentage of Teams per Rating Ranges in M.A.D. Basketball



(f) 1994

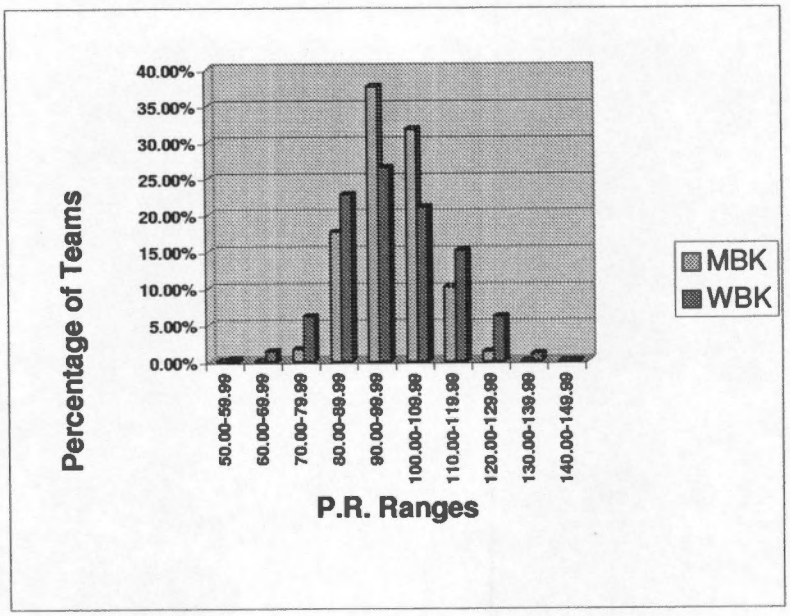
Figure 9 (continued) 1989-1997 Percentage of Teams per Rating Ranges in M.A.D. Basketball





(h) 1996

Figure 9 (continued) 1989-1997 Percentage of Teams per Rating Ranges in M.A.D. Basketball



(i) 1997

Figure 9 (continued) 1989-1997 Percentage of Teams per Rating Ranges in M.A.D. Basketball

5.2 Selection of Basketball teams to NCAA Tournament

At the end of the regular season, in Division I Men's and Women's Basketball, an NCAA Committee selects 64 teams to compete in the NCAA Tournament. Most conferences have at least one team that receives an automatic bid to the tournament. This automatic bid can typically be gained by winning the conference tournament or winning the regular season conference title. All other teams have to get an "at-large" bid to the tournament. The "at-large" bids are granted by each sport's committee that doesn't have a publicly-known fixed set of rules for selecting tournament teams. The committee not only selects the 64 teams, but it also assigns the teams to four regions, each team with a seeding of 1-16. The tournament is then played as a single elimination event with the winning team advancing to the next round, until the last two teams meet for the National Championship.

The announcement of who gets invited to the NCAA Tournament, a.k.a. the "Big Dance," is a much-publicized event. Following the announcement there is typically some controversy regarding teams that were not selected to the tournament about what seed a team received, or about the region to which a team was sent. Typically, a spokesperson for the committee discusses the reasons for the seedings. These reasons include a team's Overall Win-Loss record, their Conference Win-Loss Record, their Rating Percentage Index (R.P.I.)[2], their Strength of Schedule, the loss of a key player down the stretch, the team's Win-Loss record at the end of the season, and others. For teams left out of the tournament, or unsatisfied with their seeding or placement in the bracket, this constantly changing criteria can be a source of frustration because if they adjust their schedule to reflect past criteria, they may get penalized in following years because the criteria changed. For example, if a team is left out of the tournament one year because their strength of schedule was too weak and the following year the team plays one

[2]R.P.I. rates a team based on three factors: 1) Division I winning Percentage, 2) Opponent Success, and 3) Opponent Strength of Schedule.

of the most difficult schedules in the country, they might still be left out because the committee thinks it didn't win enough of those tough games it scheduled.

The Women's Tournament also has another tough task when setting their Tournament brackets: the top 16 teams host sub-regionals for the first two rounds of the tournament. Because a team could get to host their first two games on their home court, some critics say it gives these teams an unfair advantage. The Committee is considering moving these games to neutral sites similar to the men's tournament, where eight teams are sent to a pre-selected site for the first two rounds, and the following weekend the last 16 teams play at four different regional sites to select the four teams that will advance to the Final Four site.

If the NCAA will not set publicly-known fixed criteria for deciding which teams get selected to–and how they derive individual team seedings to–the tournament, then How can we evaluate their selections?, or What would be an alternative way of selecting and seeding tournament teams?

5.2.1 How to Evaluate NCAA Tournament Selections and Seedings. You can evaluate Men's and Women's Basketball NCAA Tournament selections and seedings by using the results of the best rating system and looking at these three criteria: 1) rank correlation, 2) "selection index" of tournament teams; and 3) whether the regions are evenly balanced. Tables 10 (Page 72) and 11 (Page 74) summarize the data for 1989-1997 Men's and Women's Basketball, respectively.

5.2.1.1 'Rank Correlation. According to Kendall and Gibbons (8), **rank correlation** between sets of ranking measures "the degree of correspondence between these two rankings." In this case, we are interested in the correspondence between the n NCAA tournament seedings and the n rankings derived from the best rating system.

Table 10: Analysis of 1989-1997 Men's Basketball Tournament Selections and Seedings

Year	Number of Teams	Rank Correlation	Selection Index	Regional Balance				
1989	64	0.8899%	75.0000%	region	ave.	min.	max.	count
				E:	111.0338	95.1400	123.6400	16
				MW:	110.9219	97.4000	124.1400	16
				SE:	112.2819	100.6500	126.4500	16
				W:	111.6338	90.6700	127.1900	16
1990	64	0.8976%	75.0000%	region	ave.	min.	max.	count
				E:	111.7369	99.4300	123.0000	16
				MW:	112.6369	98.1400	123.6300	16
				SE:	111.6400	96.9700	119.6300	16
				W:	113.3363	100.1900	126.5200	16
1991	64	0.8778%	71.8750%	region	ave.	min.	max.	count
				E:	112.4219	99.6400	127.3400	16
				MW:	112.2850	97.6400	126.2300	16
				SE:	112.3988	93.0700	127.1900	16
				W:	112.2181	100.1100	130.0000	16
1992	64	0.9000%	70.3125%	region	ave.	min.	max.	count
				E:	110.6150	93.1100	125.7700	16
				MW:	110.6406	87.9700	124.1700	16
				SE:	112.6887	93.6500	123.7800	16
				W:	111.6794	96.4500	129.0800	16
1993	64	0.8985%	64.0625%	region	ave.	min.	max.	count
				E:	110.0919	96.5500	129.1100	16
				MW:	111.9681	99.7200	125.6600	16

continued on next page

Table 10 (continued)

Year	Number of Teams	Rank Correlation	Selection Index	Regional Balance				
				SE:	111.6906	94.8600	129.2500	16
				W:	110.9850	96.1400	121.8500	16
1994	64	0.9088%	67.1875%	region	ave.	min.	max.	count
				E:	110.7544	94.1400	120.9300	16
				MW:	111.8169	90.8700	122.6300	16
				SE:	110.6962	93.7300	120.9300	16
				W:	110.5075	92.8100	123.0900	16
1995	64	0.9028%	67.1875%	region	ave.	min.	max.	count
				E:	110.6994	88.0400	123.0900	16
				MW:	110.9337	95.7800	121.7500	16
				SE:	111.4287	93.0800	127.7700	16
				W:	111.8600	89.9700	124.0500	16
1996	64	0.9048%	68.7500%	region	ave.	min.	max.	count
				E:	109.2569	91.6600	121.7000	16
				MW:	111.1462	98.5300	132.7700	16
				SE:	111.1494	96.6300	124.7600	16
				W:	110.5212	93.3600	121.1100	16
1997	64	0.9028%	71.8750%	region	ave.	min.	max.	count
				E:	109.9925	95.4600	122.4100	16
				MW:	110.3000	92.6800	122.0100	16
				SE:	111.4206	90.8200	125.2500	16
				W:	111.8763	97.5300	128.1900	16

Table 11: Analysis of 1989-1997 Women's Basketball Tournament Selections and Seedings

Year	Number of Teams	Rank Correlation	Selection Index	Regional Balance				
1989	48	0.8839%	83.3333%	region	ave.	min.	max.	count
				E:	108.6992	104.7800	117.4800	12
				ME:	108.2758	100.6500	115.1500	12
				MW:	109.0358	104.3300	115.9800	12
				W:	109.0108	105.8100	114.9800	12
1990	48	0.8364%	85.4167%	region	ave.	min.	max.	count
				E:	107.4642	99.4900	114.5800	12
				ME:	108.2908	103.9400	113.1300	12
				MW:	108.9425	103.5300	116.4000	12
				W:	110.2467	106.7500	116.8500	12
1991	48	0.8395%	87.5000%	region	ave.	min.	max.	count
				E:	107.9225	102.8300	113.1100	12
				ME:	108.4817	98.7300	114.5300	12
				MW:	109.5925	103.3200	115.8400	12
				W:	110.0658	107.2700	114.4100	12
1992	48	0.8835%	72.9167%	region	ave.	min.	max.	count
				E:	107.6758	100.7200	116.3400	12
				ME:	107.9975	103.3300	113.4900	12
				MW:	108.7175	103.3300	111.7000	12
				W:	108.7758	106.6000	113.8600	12
1993	48	0.7833%	68.7500%	region	ave.	min.	max.	count
				E:	108.1175	100.4400	113.5500	12
				ME:	108.5033	102.4900	115.4100	12

continued on next page

Table 11 (continued)

Year	Number of Teams	Rank Correlation	Selection Index	Regional Balance				
				MW:	109.4950	105.2800	114.3300	12
				W:	108.2733	102.6100	114.8300	12
1994	64	0.8785%	76.5625%	region	ave.	min.	max.	count
				E:	107.0169	100.1100	112.7200	16
				ME:	107.3337	93.9200	115.9900	16
				MW:	107.3369	99.0900	115.0100	16
				W:	107.7806	95.9100	114.9700	16
1995	64	0.8584%	71.8750%	region	ave.	min.	max.	count
				E:	106.5506	95.4100	116.7400	16
				ME:	108.1500	98.1800	118.8000	16
				MW:	108.0300	99.4900	114.5100	16
				W:	108.1644	99.0900	117.2700	16
1996	64	0.8901%	70.3125%	region	ave.	min.	max.	count
				E:	107.1156	96.9900	115.7500	16
				ME:	107.7200	97.5500	115.2800	16
				MW:	108.0306	99.0600	114.7800	16
				W:	107.7813	99.6000	115.4100	16
1997	64	0.8872%	78.1250%	region	ave.	min.	max.	count
				E:	107.6825	98.1900	112.7300	16
				ME:	107.8187	97.2800	117.0400	16
				MW:	107.9606	94.7800	115.6800	16
				W:	108.1325	98.2200	116.3200	16

How do we use rank correlation to evaluate Tournament Selections? Because the teams are not seeded[3] from 1 to 64, this is a case of **tied ranks**; i.e., you have four teams seeded 1st, four seeded 2nd, ..., and four seeded 16th. For each team selected to the NCAA Tournament, their ratings from the best rating system are used to rank the teams from 1 to 64. To work around ties in the seedings, I assign to each tied team a rank equal to their average ranking if they were not tied (Kendall and Gibbons). For example, the top four teams seeded number 1 should be assigned the rank of 2.5: $(1+2+3+4)/4$. Second seeded teams should be ranked 4.5: $(5+6+7+8)/4$. And so on... Another assumption I make about these two rankings is that neither ranking is ordered objectively. An argument could be made, though, that the rankings derived from the best rating system are an objective ordering in that no committee is deciding these ratings using criteria that changes year-to-year. Regardless, there is not much numerical difference in the rank correlation derived from the formulas used for two subjective orderings and the case where one ordering is objective.

The **Spearman rho** coefficient for subjective orderings, r_{sb}, is calculated as follows [Kendall and Gibbons (8)]:

$$r_{sb} = \frac{\frac{1}{6}(n^3 - n) - \sum d^2 - U' - V'}{\sqrt{[\frac{1}{6}(n^3 - n) - 2U'][\frac{1}{6}(n^3 - n) - 2V']}} \tag{32}$$

where

n is the number of items ranked (teams)

$\sum d^2$ is the sum of squares of the rank-differences

$U' = \frac{1}{12}\sum u^3 - u$ for each set of ties u in the first set of rankings (team seedings)

$V' = \frac{1}{12}\sum v^3 - v$ for each set of ties v in the second set of rankings (rankings derived from team ratings).

[3]teams are divided into four regions and seeded 1 to 16.

The Spearman rho (rank correlation) values for the 1989-1997 NCAA Men's and Women's Basketball Tournaments are summarized in Tables 10 and 11 on pages 72 and 74, respectively.

The average rank correlation for Men's Basketball (0.8981) and Women's Basketball (0.8601) are similar. Their ranges (minimum rank correlation, maximum rank correlation) also overlap; Men's Basketball: (0.8778, 0.9088) and Women's Basketball: (0.7833, 0.8901). What is striking is that Women's Basketball has three years where the rank correlation seems quite low compared to other years. The 1993 Women's Basketball season had the lowest rank correlation of all years, for both men and women, at 0.7833. The 1990 and 1991 seasons also had relatively low rank correlations: 0.8364 and 0.8395, respectively. It would be interesting to study these years in more detail to find possible explanations for the low rank correlation.

5.2.1.2 Selection Index. NCAA Tournament Selections can be evaluated by considering how many bids were selected from the top 64 teams of the best rating system. Because the number of teams selected to the tournament has changed over the years, a percentage of teams is probably a better measure of the selection. A **selection index** measures what percentage of teams invited to the tournament is rated in the top n of the best rating system. Tables 10 (Page 72) and 11 (Page 74) summarize the selection index for the 1989-1997 NCAA Men's and Women's Tournaments.

The average selection index for both Men's Basketball (70.14%) and Women's Basketball (77.20%) are comparable, and their ranges also overlap: Men's Basketball (64.06%, 75.00%) and Women's Basketball (68.75%, 87.50%). Somewhat notable is that there are four consecutive years in Men's Basketball where the selection index is below 70.00%: 1993, 1994, 1995, and 1996. In Women's Basketball, only 1993 is below 70.00%. Figure 10 on page 78 shows how the selection index varies per year for both Men's and Women's Basketball. The

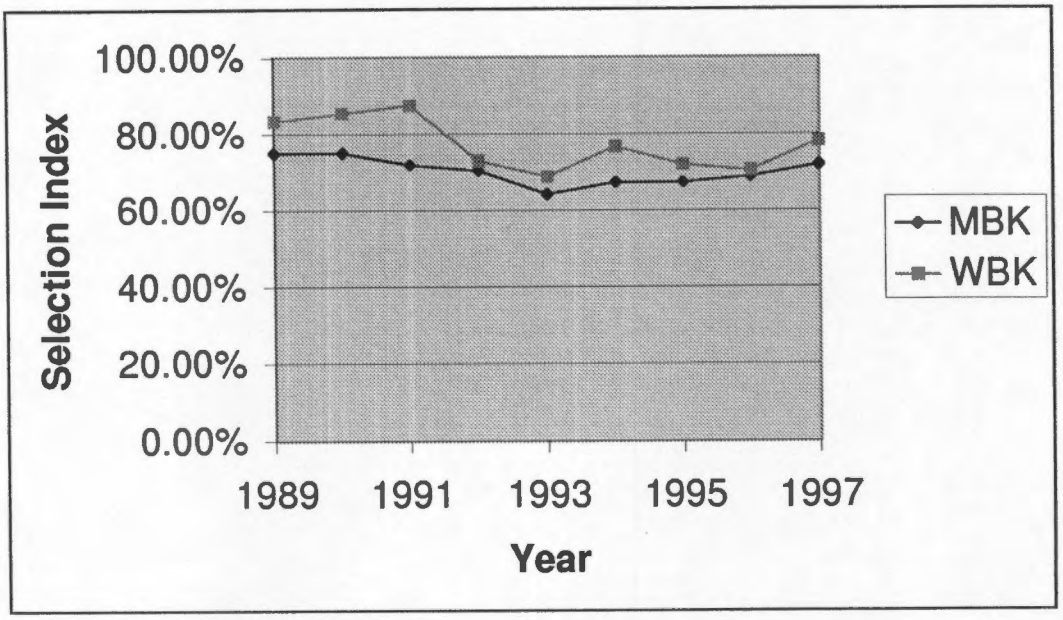
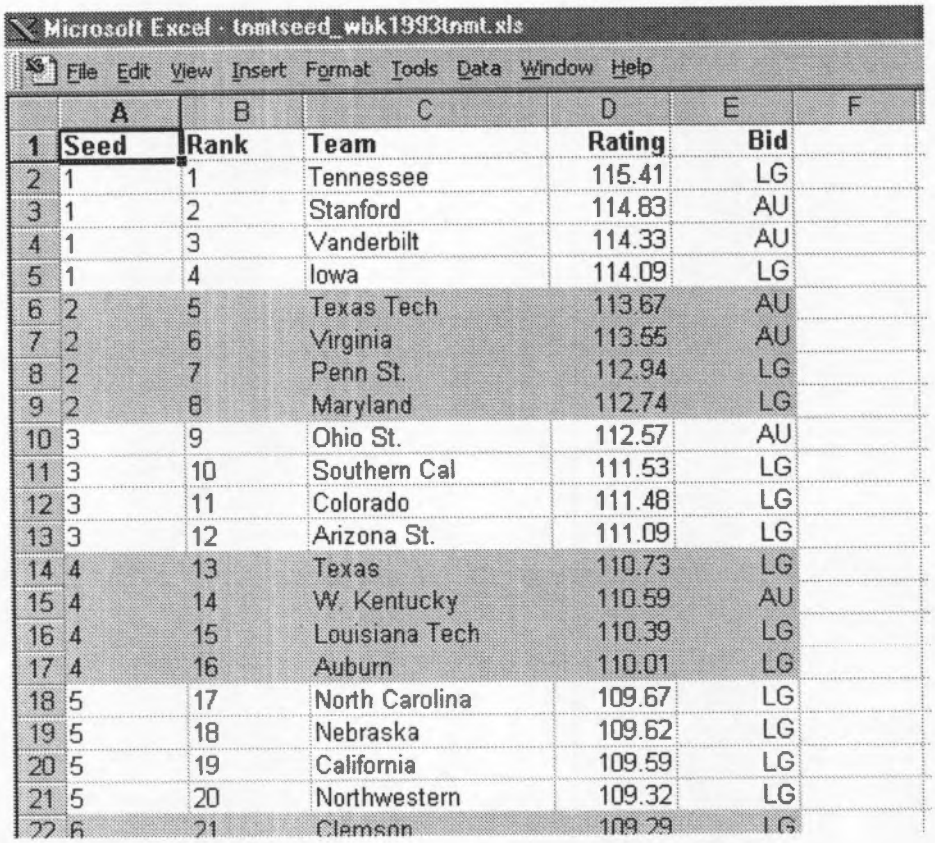


Figure 10 1989-1997 NCAA Basketball Tournament Selection Index

selection index data can be found in the aforementioned tables, Table 10 and Table 11.

5.2.1.3 Regional Balance. Tournament regional balance can be evaluated by calculating each region's average rating and the range of the ratings (minimum rating, maximum rating). For both Men's and Women's Basketball, the regions for each year appear to be fairly balanced. There are no glaring discrepancies within any one year.

5.2.2 NCAA Tournament Brackets using Alternative Selection Method. In this section, I propose an alternative method for selecting teams to the NCAA tournament. First, use a rating system to select the remaining "at-large" teams to the NCAA tournament. That is, once all the automatic bids have been determined, pick the "at-large" teams from the top 64 rated teams. If 32 teams earn automatic bids, start with the highest rated team that did not earn an automatic bid and grant it an "at-large" bid. Select the second highest rated team not already in the tournament, and so on until the 64 slots are filled. After selecting the teams to the



	A	B	C	D	E	F
1	**Seed**	**Rank**	**Team**	**Rating**	**Bid**	
2	1	1	Tennessee	115.41	LG	
3	1	2	Stanford	114.83	AU	
4	1	3	Vanderbilt	114.33	AU	
5	1	4	Iowa	114.09	LG	
6	2	5	Texas Tech	113.67	AU	
7	2	6	Virginia	113.55	AU	
8	2	7	Penn St.	112.94	LG	
9	2	8	Maryland	112.74	LG	
10	3	9	Ohio St.	112.57	AU	
11	3	10	Southern Cal	111.53	LG	
12	3	11	Colorado	111.48	LG	
13	3	12	Arizona St.	111.09	LG	
14	4	13	Texas	110.73	LG	
15	4	14	W. Kentucky	110.59	AU	
16	4	15	Louisiana Tech	110.39	LG	
17	4	16	Auburn	110.01	LG	
18	5	17	North Carolina	109.67	LG	
19	5	18	Nebraska	109.62	LG	
20	5	19	California	109.59	LG	
21	5	20	Northwestern	109.32	LG	
22	6	21	Clemson	109.29	LG	

Figure 11 Spreadsheet for Seeding Teams

tournament, rank these teams using their ratings. The top four teams get top seeds, the 5-8 rated teams get second seeds, and continue until the last four teams remain for the sixteenth seeds. Figure 11 on page 79 shows a spreadsheet for seeding teams 1-64. Finally, assign the teams to regions.

To assign teams to regions use the following procedure. For the top team in each region only, the committee can use their judgment to assign a team to the region they think is most appropriate. Once the top seeds are selected, assign the second seeds using this procedure: the region with the lowest average rating so far gets assigned the highest rated incoming seed, the region with the second lowest average rating is assigned the second highest rated incoming seed, the region with

the third lowest average rating is assigned the third highest rated incoming seed. Repeat this procedure for the remaining seeds: fourth through sixteenth seeds.

Table 12 on page 81 shows the results of applying the alternative selection method to 1993 Women's Basketball ratings prior to the start of the tournament. The assignment of teams to regions procedure could easily be implemented using a spreadsheet (see Figure 12 on page 82)[4].

The top four teams prior to the start of the tournament were: 1) Tennessee (115.41), 2) Stanford (114.83), 3) Vanderbilt (114.33), and 4) Iowa (114.09). I assigned the top four seeds to these regionals: EAST: Charlottesville, VA (Tennessee); MIDEAST: West Lafayette, IN (Iowa); MIDWEST: Boulder, CO (Vanderbilt); and WEST: Seattle, WA (Stanford). Because Tennessee had the top seed, Vanderbilt is to be sent out to Colorado, which is closer than going to Seattle. Iowa stays in Lafayette to take advantage of the Big Ten fan base. After these four assignments, the remaining seeds are assigned using the above procedure. If the remaining seeds have certain courts they can't play on because the court is considered a home court, for example in Men's Basketball, and if that teams gets assigned to play on its home court, replace this team with the nearest team in rating that doesn't have this home court problem. This could also be implemented in the Linear Program of the following section through additional constraints or not allowing that team to be assigned to that region.

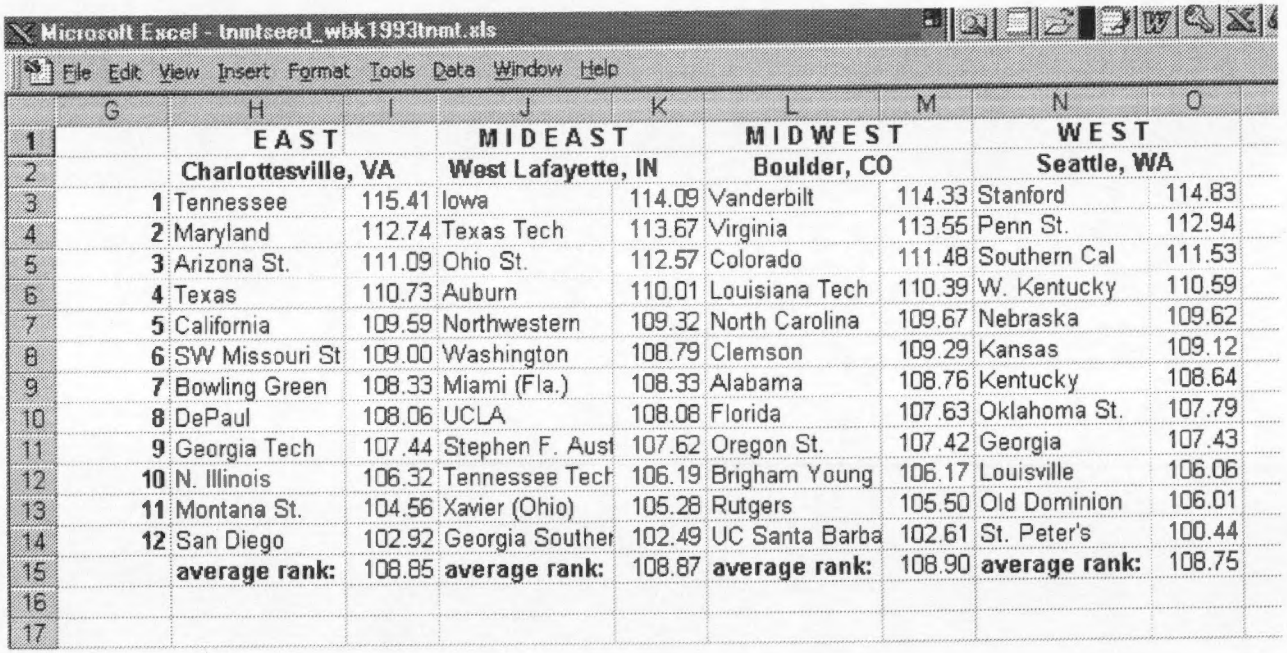
The revised selections to the 1993 Women's Basketball tournament resulted in a rank correlation of 0.9967, a 75.00% selection index, and average ratings of 108.8492, 108.8700, 108.9000, and 108.7500, which indicate regional balance. The summary numbers for the 1993 tournament can be found in Table 11 on page 74. In conclusion, the revised selection procedure resulted in an improvement in all three areas: rank correlation, selection index, and regional balance.

[4]This spreadsheet shows one way of implementing this method; other methods are possible, such as developing an application entirely devoted to this method or a macro to do the assignments.

Table 12 Proposed 1993 Women's Basketball Tournament Selections and Seedings

SEED	EAST *Charlottesville, VA*		MIDEAST *West Lafayette, IN*		MIDWEST *Boulder, CO*		WEST *Seattle, WA*	
1	Tennessee	115.41	Iowa	114.09	Vanderbilt	114.33	Stanford	114.83
2	Maryland	112.74	Texas Tech	113.67	Virginia	113.55	Penn St.	112.94
3	Arizona St.	111.09	Ohio St.	112.57	Colorado	111.48	Southern Cal	111.53
4	Texas	110.73	Auburn	110.01	Louisiana Tech	110.39	W. Kentucky	110.59
5	California	109.59	Northwestern	109.32	North Carolina	109.67	Nebraska	109.62
6	SW Missouri St.	109.00	Washington	108.79	Clemson	109.29	Kansas	109.12
7	Bowling Green	108.33	Miami (Fla.)	108.33	Alabama	108.76	Kentucky	108.64
8	DePaul	108.06	UCLA	108.08	Florida	107.63	Oklahoma St.	107.79
9	Georgia Tech	107.44	S. F. Austin[5]	107.62	Oregon St.	107.42	Georgia	107.43
10	N. Illinois	106.32	Tennessee Tech	106.19	Brigham Young	106.17	Louisville	106.06
11	Montana St.	104.56	Xavier (Ohio)	105.28	Rutgers	105.50	Old Dominion	106.01
12	San Diego	102.92	Georgia Southern	102.49	UCSB[6]	102.61	St. Peter's	100.44
	average rank:	108.85	**average rank:**	108.87	**average rank:**	108.90	**average rank:**	108.75

[5] Stephen F. Austin
[6] UC Santa Barbara



	G	H	I	J	K	L	M	N	O
1		EAST		MIDEAST		MIDWEST		WEST	
2		Charlottesville, VA		West Lafayette, IN		Boulder, CO		Seattle, WA	
3	1	Tennessee	115.41	Iowa	114.09	Vanderbilt	114.33	Stanford	114.83
4	2	Maryland	112.74	Texas Tech	113.67	Virginia	113.55	Penn St.	112.94
5	3	Arizona St.	111.09	Ohio St.	112.57	Colorado	111.48	Southern Cal	111.53
6	4	Texas	110.73	Auburn	110.01	Louisiana Tech	110.39	W. Kentucky	110.59
7	5	California	109.59	Northwestern	109.32	North Carolina	109.67	Nebraska	109.62
8	6	SW Missouri St	109.00	Washington	108.79	Clemson	109.29	Kansas	109.12
9	7	Bowling Green	108.33	Miami (Fla.)	108.33	Alabama	108.76	Kentucky	108.64
10	8	DePaul	108.06	UCLA	108.08	Florida	107.63	Oklahoma St.	107.79
11	9	Georgia Tech	107.44	Stephen F. Aust	107.62	Oregon St.	107.42	Georgia	107.43
12	10	N. Illinois	106.32	Tennessee Tech	106.19	Brigham Young	106.17	Louisville	106.06
13	11	Montana St.	104.56	Xavier (Ohio)	105.28	Rutgers	105.50	Old Dominion	106.01
14	12	San Diego	102.92	Georgia Souther	102.49	UC Santa Barba	102.61	St. Peter's	100.44
15		average rank:	108.85	average rank:	108.87	average rank:	108.90	average rank:	108.75
16									
17									

Figure 12 Spreadsheet for Assigning Tournament Teams to Regions

5.2.2.1 Linear Program for Evenly Balanced Regions. To be thorough, I also formulate the Linear Program (Equation 33) that optimally assigns teams to regions to achieve balanced regions.

Minimize

$$|R_1 - R_2| + |R_2 - R_3| + |R_3 - R_4| \tag{33}$$

subject to

$$c_1\, X1R1 + c_2\, X2R1 + \ldots + c_{64}\, X64R1 = R1$$
$$c_1\, X1R2 + c_2\, X2R2 + \ldots + c_{64}\, X64R2 = R2$$
$$c_1\, X1R3 + c_2\, X2R3 + \ldots + c_{64}\, X64R3 = R3$$
$$c_1\, X1R4 + c_2\, X2R4 + \ldots + c_{64}\, X64R4 = R4$$
$$X1R1 + X2R1 + \ldots + X64R1 = 16$$
$$X1R2 + X2R2 + \ldots + X64R2 = 16$$
$$X1R3 + X2R3 + \ldots + X64R3 = 16$$
$$X1R4 + X2R4 + \ldots + X64R4 = 16$$
$$X1R1 + X1R2 + X1R3 + X1R4 = 1$$
$$X2R1 + X2R2 + X2R3 + X2R4 = 1$$
$$\vdots$$
$$X64R1 + X64R2 + X64R3 + X64R4 = 1$$
$$XiRj \geq 0, \forall i = 1 \ldots 64, j = 1 \ldots 4$$
$$XiRj \leq 1, \forall i = 1 \ldots 64, j = 1 \ldots 4$$
$$R_j \geq 0, \forall j = 1 \ldots 4$$

where

R_j is region $j, j = 1 \ldots 4$

c_i is the rating of the $i-th$ rated team
$XiRj$ is variable indicating if ith rated team is in region j.

5.2.3 Miscellaneous Applications of Rating Systems. Rating systems are not only applied to selecting tournament teams, but can also be used to determine the Yearly Top 25 Teams, the Team of the Decade for a sport, and they can be used to study How Accuracy Changes as the Season Progresses.

5.2.3.1 Yearly Top 25 Teams. The importance of calculating Yearly Top 25 teams[7] at the end of the year is that they take into account both a team's post season performance and a team's season-long performance. In sports such as Men's and Women's Basketball that have a season ending tournament to decide the national champion, sometimes a team's regular season performance can become overshadowed by a team's luck and performance in the NCAA Tournament. A similar situation is happening in College Football. The **Bowl Championship Series** (BCS) championship game between the BCS #1 and #2 teams is overshadowing all other bowl games; attendance and television ratings for other bowl games have dropped dramatically (43). For each of the three sports, Tables 13-21 show Top 25 teams over a nine year period.

5.2.3.2 Selecting the team of the decade for each sport. Another application of rating systems is to derive other interesting tidbits, such as "Team of the decade." The method I propose for selecting the team of the decade is to use the best rating system to derive end-of-year team rankings for each year (points). Then for each team, add their end-of-year points, and the team with the lowest point total, is the team of the decade. An advantage of using points versus just averaging the ratings is that if a team were much better than others in a few years but average in others, it would skew their average rating. By using points we still

[7]Instead of Top 25, it could be Top 50, Top 100, or simply final ratings showing all teams' standings after the tournament.

Table 13: 1988-1990 Yearly Top 25 Men's Football Teams

	1988		1989		1990	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Florida St.	141.86	Houston	148.08	Miami (Fla.)	142.50
2	Miami (Fla.)	141.63	Florida St.	139.81	Washington	139.32
3	Notre Dame	138.26	Miami (Fla.)	138.12	Florida St.	137.92
4	West Virginia	133.68	Notre Dame	138.07	Colorado	134.72
5	Southern Cal	133.57	Colorado	135.86	Oklahoma	134.59
6	Auburn	132.98	Clemson	134.73	Virginia	134.04
7	Michigan	132.27	Southern Cal	134.24	Georgia Tech	133.93
8	UCLA	130.53	Nebraska	132.65	Clemson	133.58
9	Clemson	130.31	Auburn	129.71	Florida	133.16
10	Houston	129.78	Michigan	129.71	Michigan	132.45
11	Nebraska	129.63	Texas A&M	129.36	Tennessee	131.86
12	Oklahoma St.	127.51	Michigan St.	128.62	Nebraska	131.82
13	Syracuse	127.36	Alabama	128.26	Texas A&M	130.68
14	Oklahoma	126.56	Washington	128.09	Texas	129.98
15	Arkansas	124.91	Arkansas	126.67	Notre Dame	129.88
16	Georgia	124.77	Tennessee	126.56	Houston	129.65
17	Michigan St.	124.71	Illinois	125.45	Penn St.	127.61
18	Pittsburgh	124.07	Penn St.	124.12	Iowa	125.73
19	Alabama	123.13	Virginia	123.71	Southern Cal	124.74
20	Indiana	122.87	Oklahoma	123.44	N. Carolina St.	123.76
21	Washington St.	122.45	Texas Tech	122.21	Ohio St.	123.67
22	Wyoming	121.09	Arizona	122.11	Syracuse	123.19
23	N. Carolina St.	120.62	LSU	121.88	Michigan St.	122.53
24	LSU	120.60	West Virginia	121.76	Oregon	121.89

continued on next page

Table 13 (continued)

	1988		1989		1990	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
25	Arizona	120.50	Washington St.	121.74	Brigham Young	121.82

Table 14: 1991-1993 Yearly Top 25 Men's Football Teams

	1991		1992		1993	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Washington	149.23	Florida St.	142.66	Florida St.	151.06
2	Miami (Fla.)	140.80	Notre Dame	139.31	Tennessee	143.66
3	Penn St.	139.19	Nebraska	138.79	Nebraska	142.50
4	Michigan	138.77	Michigan	137.06	Florida	141.92
5	Florida St.	137.07	Alabama	135.47	Notre Dame	139.66
6	Nebraska	136.01	Miami (Fla.)	134.39	Texas A&M	139.65
7	Florida	134.74	Washington	134.20	Michigan	137.13
8	Texas A&M	134.48	Stanford	131.38	UCLA	136.50
9	Oklahoma	133.14	Georgia	130.91	Penn St.	134.83
10	California	132.90	Penn St.	128.11	Oklahoma	134.68
11	Notre Dame	132.29	Arizona	127.36	Arizona	133.49
12	Stanford	129.79	Tennessee	127.31	Southern Cal	132.43
13	Alabama	128.87	N. Carolina St.	127.12	Ohio St.	132.06
14	Colorado	128.38	Texas A&M	126.75	Wisconsin	131.98
15	UCLA	128.27	Syracuse	126.64	Colorado	131.62
16	Tennessee	127.61	Colorado	126.43	Washington	130.66
17	Virginia	126.75	Ohio St.	126.13	Alabama	130.55
18	Iowa	125.01	Florida	124.96	Miami (Fla.)	130.46
19	Clemson	124.62	Southern Cal	124.80	Auburn	129.55
20	Syracuse	124.16	Arizona St.	124.79	Arizona St.	128.24
21	Georgia Tech	122.83	Virginia	124.53	West Virginia	128.17
22	Texas	121.83	Fresno St.	122.51	California	127.14
23	Indiana	121.65	Kansas	122.36	Boston College	127.11
24	Brigham Young	121.55	Brigham Young	122.06	Georgia	126.18

continued on next page

Table 14 (continued)

	1991		1992		1993	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
25	Ohio St.	121.31	Oklahoma	121.44	Virginia Tech	125.22

Table 15: 1994-1996 Yearly Top 25 Men's Football Teams

	1994		1995		1996	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Penn St.	147.64	Nebraska	159.91	Nebraska	155.39
2	Florida	144.86	Florida	146.44	Florida	151.95
3	Florida St.	142.65	Florida St.	145.90	Ohio St.	150.95
4	Nebraska	141.14	Ohio St.	145.02	Florida St.	147.47
5	Colorado	137.47	Kansas St.	140.60	Arizona St.	145.22
6	Tennessee	137.21	Tennessee	139.71	Notre Dame	143.04
7	Miami (Fla.)	136.72	Colorado	139.05	Tennessee	139.61
8	Southern Cal	136.24	Notre Dame	138.45	Colorado	139.54
9	Illinois	135.13	Penn St.	138.37	Penn St.	139.13
10	Michigan	133.90	Northwestern	136.43	Texas	137.70
11	Ohio St.	133.04	Michigan	134.17	North Carolina	137.12
12	Auburn	132.47	Virginia Tech	132.95	Washington	137.10
13	Wisconsin	131.07	LSU	131.92	Syracuse	136.51
14	Oregon	130.75	Syracuse	131.36	Kansas St.	135.18
15	Alabama	130.72	Iowa	131.23	Michigan	134.95
16	Utah	130.13	Southern Cal	131.11	Iowa	133.94
17	Texas A&M	130.00	Texas A&M	130.34	Virginia Tech	133.70
18	Notre Dame	129.87	Auburn	129.70	Brigham Young	131.92
19	Washington St.	128.70	Miami (Fla.)	129.05	Miami (Fla.)	131.42
20	Kansas St.	128.27	Virginia	128.91	Southern Cal	131.26
21	Virginia	127.78	Texas	128.62	Virginia	131.11
22	Washington	127.57	Purdue	128.08	Alabama	130.51
23	Arizona	127.39	Washington	127.79	Texas Tech	130.48
24	Boston College	127.35	Illinois	127.40	Wisconsin	129.60

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Table 15 (continued)

	1994		1995		1996	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
25	Georgia	125.84	Kansas	126.72	Marshall	129.02

Table 16: 1989-1991 Yearly Top 25 Men's Basketball Teams

	1989		1990		1991	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Arizona	127.19	UNLV	126.52	UNLV	130.00
2	Michigan	126.45	Oklahoma	123.63	North Carolina	127.34
3	Illinois	124.14	Kansas	123.00	Arkansas	127.19
4	Duke	123.64	Arizona	122.14	Duke	126.23
5	Seton Hall	122.11	Georgetown	121.34	Kansas	125.30
6	Syracuse	122.07	Connecticut	120.60	Arizona	124.19
7	North Carolina	121.60	Duke	120.48	Indiana	122.70
8	Oklahoma	121.54	Arkansas	119.79	Oklahoma St.	120.94
9	Georgetown	120.67	Georgia Tech	119.63	Seton Hall	119.46
10	Missouri	120.58	Alabama	118.99	Missouri	118.58
11	Indiana	120.00	Syracuse	118.91	UCLA	118.45
12	Arkansas	118.54	Loyola Marymount	118.20	Syracuse	117.88
13	Iowa	118.00	Illinois	118.00	Ohio St.	117.62
14	Stanford	117.54	Michigan	117.65	Nebraska	117.55
15	Purdue	116.82	N. Carolina St.	117.54	Connecticut	117.10
16	Providence	116.35	Minnesota	117.51	Georgetown	116.96
17	UNLV	115.86	Purdue	117.31	Georgia Tech	116.76
18	Louisville	115.73	Michigan St.	117.20	N. Carolina St.	116.51
19	N. Carolina St.	115.66	Indiana	116.68	Kentucky	116.34
20	Oregon St.	115.31	LSU	116.36	Pittsburgh	116.09
21	Virginia	115.09	Clemson	116.26	LSU	115.90
22	South Alabama	114.67	Louisville	116.18	Oklahoma	115.80
23	Minnesota	114.31	North Carolina	116.03	Virginia	114.96

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Table 16 (continued)

	1989		1990		1991	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
24	Kansas	113.61	Providence	115.38	Wake Forest	114.78
25	St. Mary's (Cal.)	113.58	Ohio St.	114.94	St. John's	114.71

Table 17: 1992-1994 Yearly Top 25 Men's Basketball Teams

	1992		1993		1994	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Indiana	129.08	Kentucky	129.25	Arizona	123.09
2	Duke	125.77	North Carolina	129.11	Arkansas	122.63
3	Kansas	124.17	Indiana	125.66	Purdue	120.93
4	Ohio St.	123.78	Duke	124.02	Connecticut	120.93
5	Cincinnati	123.56	Cincinnati	122.65	North Carolina	120.31
6	Arizona	122.08	Michigan	121.85	Kansas	120.31
7	Kentucky	120.89	Seton Hall	121.21	Kentucky	120.10
8	Oklahoma St.	120.04	Kansas	121.17	Duke	119.86
9	LSU	119.74	Arizona	120.84	Minnesota	119.14
10	Michigan	118.93	Vanderbilt	119.71	Providence	118.82
11	UNLV	118.84	Arkansas	118.89	Illinois	118.06
12	Arkansas	118.61	Iowa	118.08	Michigan	118.02
13	Oklahoma	118.56	Florida St.	117.72	Florida	117.10
14	UCLA	117.68	Iowa St.	117.55	Louisville	117.04
15	Iowa	117.36	Wake Forest	117.26	Georgetown	117.00
16	North Carolina	117.02	Minnesota	117.20	Oklahoma St.	116.81
17	Michigan St.	116.85	Oklahoma	115.30	Massachusetts	116.56
18	Massachusetts	116.62	W. Kentucky	115.27	Syracuse	116.49
19	Georgia Tech	115.84	Louisville	115.05	Texas	116.44
20	Missouri	115.61	Providence	115.01	Michigan St.	116.27
21	Florida St.	115.49	Georgetown	114.56	Cincinnati	116.20
22	Virginia	115.25	St. John's	114.35	Missouri	116.19
23	Seton Hall	115.24	Temple	114.24	Temple	116.06

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Table 17 (continued)

	1992		1993		1994	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
24	St. John's	115.11	Virginia	114.24	Boston College	115.87
25	UTEP	114.99	Oklahoma St.	114.11	Marquette	115.82

Table 18: 1995-1997 Yearly Top 25 Men's Basketball Teams

	1995		1996		1997	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Kentucky	127.77	Kentucky	132.77	Kentucky	128.19
2	UCLA	124.05	Connecticut	124.76	Kansas	125.25
3	Oklahoma St.	123.09	Georgetown	121.70	North Carolina	122.41
4	North Carolina	122.49	Massachusetts	121.43	Minnesota	122.01
5	Massachusetts	121.92	Kansas	121.11	Arizona	121.20
6	Kansas	121.75	Syracuse	119.88	Duke	119.96
7	Virginia	120.73	Cincinnati	119.71	Stanford	119.92
8	Maryland	120.53	Villanova	119.12	Wake Forest	118.67
9	Wake Forest	120.35	Georgia	118.76	Iowa	118.39
10	Cincinnati	117.99	Mississippi St.	118.11	Cincinnati	118.35
11	Connecticut	117.88	Arizona	117.47	Utah	118.20
12	Arizona	117.57	Wake Forest	117.42	UCLA	116.92
13	Arkansas	117.11	Georgia Tech	117.00	California	116.67
14	Mississippi St.	116.89	Utah	116.92	Michigan	116.57
15	St. Louis	116.76	Iowa	116.14	Clemson	115.88
16	Utah	116.40	Purdue	116.09	Tulsa	115.72
17	Michigan St.	115.98	Indiana	115.69	Villanova	115.55
18	Villanova	115.63	Louisville	115.19	Rhode Island	115.26
19	Iowa St.	115.54	North Carolina	114.99	Maryland	115.24
20	Arizona St.	115.53	Texas Tech	114.99	Illinois	115.17
21	Florida	115.10	Boston College	114.77	Providence	115.08
22	Texas	115.06	Duke	114.39	Xavier (Ohio)	115.02
23	Alabama	114.94	Stanford	114.37	South Carolina	114.98

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Table 18 (continued)

	1995		1996		1997	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
24	Oklahoma	114.43	Maryland	114.00	Florida St.	114.91
25	Syracuse	114.42	Penn St.	113.86	N. Carolina St.	114.81

Table 19: 1989-1991 Yearly Top 25 Women's Basketball Teams

	1989		1990		1991	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Tennessee	118.04	Stanford	117.07	Virginia	115.56
2	Louisiana Tech	116.08	Louisiana Tech	116.63	Stanford	114.82
3	Auburn	115.56	Tennessee	114.67	Georgia	114.43
4	Maryland	115.26	Texas	113.73	Purdue	114.20
5	Stanford	114.13	UNLV	113.25	Tennessee	113.94
6	Long Beach St.	113.67	Stephen F. Austin	113.07	Auburn	113.57
7	Texas	113.02	Auburn	113.03	Penn St.	112.79
8	Iowa	111.97	Iowa	112.81	Washington	112.57
9	Georgia	111.49	Washington	112.36	N. Carolina St.	112.28
10	N. Carolina St.	111.09	N. Carolina St.	111.87	Arkansas	111.53
11	Colorado	110.60	Georgia	111.08	Iowa	111.10
12	Ohio St.	110.57	Long Beach St.	111.06	Texas	110.92
13	Mississippi	110.53	Virginia	110.79	Long Beach St.	110.67
14	Clemson	110.35	Hawaii	110.44	Lamar	110.54
15	Rutgers	110.28	Purdue	110.06	Connecticut	110.19
16	South Carolina	110.23	Arkansas	109.67	LSU	110.03
17	Purdue	110.22	South Carolina	109.66	Northwestern	109.89
18	UNLV	109.91	Maryland	109.35	Stephen F. Austin	109.76
19	Stephen F. Austin	109.67	Kentucky	109.26	Oklahoma St.	109.56
20	LSU	109.38	N. Illinois	109.25	Florida St.	109.47
21	Washington	109.24	Northwestern	108.90	W. Kentucky	109.20
22	Virginia	108.77	Penn St.	108.88	Cal St.-Fullerton	109.03
23	W. Kentucky	108.60	Mississippi	108.75	Vanderbilt	108.65

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Table 19 (continued)

	1989		1990		1991	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
24	James Madison	108.13	Southern Miss.	108.63	UNLV	108.64
25	Vanderbilt	108.12	LSU	108.47	Michigan St.	108.50

Table 20: 1992-1994 Yearly Top 25 Women's Basketball Teams

	1992		1993		1994	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Virginia	116.53	Tennessee	115.39	Tennessee	115.93
2	Stanford	114.35	Stanford	114.79	Penn St.	114.81
3	Tennessee	113.59	Iowa	114.58	Stanford	114.61
4	Maryland	112.28	Texas Tech	114.51	Purdue	114.26
5	Purdue	112.12	Vanderbilt	114.16	North Carolina	113.55
6	SW Missouri St.	111.74	Virginia	113.40	Connecticut	112.71
7	Penn St.	111.69	Ohio St.	113.13	Vanderbilt	112.67
8	Iowa	111.55	Penn St.	112.75	Texas Tech	112.42
9	Vanderbilt	111.49	Maryland	112.39	Louisiana Tech	112.37
10	Miami (Fla.)	110.76	Colorado	111.62	Southern Cal	112.35
11	W. Kentucky	110.63	Southern Cal	111.57	Alabama	112.23
12	Texas Tech	110.35	Arizona St.	111.12	SW Missouri St.	111.74
13	Texas	110.34	Louisiana Tech	111.05	Washington	110.78
14	Mississippi	109.76	W. Kentucky	110.82	Virginia	110.72
15	Southern Cal	109.52	Texas	110.80	Colorado	110.35
16	UCLA	109.50	Auburn	109.94	Iowa	110.06
17	West Virginia	109.48	California	109.71	Seton Hall	109.92
18	Lamar	109.38	Northwestern	109.57	Montana	109.75
19	Creighton	109.32	Nebraska	109.49	Florida Int'l	109.31
20	Stephen F. Austin	109.31	North Carolina	109.39	Creighton	109.26
21	California	109.08	SW Missouri St.	109.19	Mississippi	109.24
22	Auburn	108.74	Washington	109.16	Northwestern	109.13
23	Clemson	108.69	Alabama	108.97	Kansas	109.00

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Table 20 (continued)

	1992		1993		1994	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
24	Kansas	108.50	Clemson	108.90	Maryland	109.00
25	North Carolina	108.40	Kansas	108.89	W. Kentucky	108.79

Table 21: 1995-1997 Yearly Top 25 Women's Basketball Teams

	1995		1996		1997	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Tennessee	118.84	Tennessee	116.42	Stanford	116.97
2	Connecticut	117.80	Stanford	115.52	Old Dominion	116.63
3	Vanderbilt	117.24	Connecticut	115.41	Connecticut	115.75
4	Stanford	116.68	Louisiana Tech	115.04	Tennessee	113.61
5	Louisiana Tech	114.64	Georgia	115.03	Georgia	113.05
6	Colorado	114.63	Virginia	113.84	Louisiana Tech	112.88
7	Texas Tech	113.99	Old Dominion	112.88	North Carolina	112.50
8	Georgia	112.97	Vanderbilt	112.61	Alabama	112.15
9	Virginia	112.92	Penn St.	111.87	Virginia	111.90
10	North Carolina	112.86	Purdue	111.85	Purdue	111.64
11	Penn St.	112.81	Iowa	111.83	Notre Dame	111.40
12	Purdue	112.35	Auburn	111.60	Florida	111.17
13	W. Kentucky	112.24	Alabama	111.56	Vanderbilt	111.01
14	Alabama	111.56	Texas Tech	111.29	Iowa	111.00
15	Mississippi	110.78	Duke	111.15	Illinois	111.00
16	Florida	110.71	Wisconsin	110.70	George Washington	110.99
17	Oregon St.	110.62	Oregon St.	110.67	N. Carolina St.	110.87
18	Washington	110.47	Notre Dame	110.54	Kansas	110.73
19	Ohio St.	109.86	Arizona	110.42	Michigan St.	110.73
20	Montana	109.47	Florida	110.12	Arizona	110.59
21	Kansas	109.11	Colorado	109.83	Texas	110.57
22	Oklahoma	109.10	Ohio St.	109.71	Colorado	110.55
23	Wisconsin	108.88	Clemson	109.63	Oregon	110.16

continued on next page

Table 21 (continued)

	1995		1996		1997	
Rank	*Team*	*Rating*	*Team*	*Rating*	*Team*	*Rating*
24	Oregon	108.87	Stephen F. Austin	109.41	Duke	110.08
25	Auburn	108.85	Nebraska	109.02	Southern Cal	109.92

keep the rating but now they are encapsulated into rankings and a few seasons' performances do not have undue influence over others. The teams of the decade were: Florida State in College Football (Table 22), Arizona in Men's Basketball (Table 23), and Tennessee in Women's Basketball (Table 24). In football, Florida State had a double-digit lead, 27 points, over Nebraska. Arizona edged Kansas by seven points, while Tennessee barely edged out Stanford by two points.

Strictly speaking, these teams of the decade were computed only to show how you would calculate the team of the decade. The above "team of the decade" results are really the best over a nine year period; the data of this research overlaps two decades: the late 1980s and most of the 1990s. I also used the first year of the ten year data as "initialization" data. Therefore, I only used the last nine for these ratings. For College Football the nine years were from 1988-1996, while in Men's and Women's Basketball they refer to 1989-1997 seasons.

Table 22: Football Team of the Decade (1988-1996)

Rank	Team	Points
1	Florida St.	23
2	Nebraska	49
3	Notre Dame	72
4	Miami (Fla.)	77
5	Michigan	78
6	Colorado	100
7	Florida	102
8	Penn St.	103
9	Tennessee	124
10	Washington	128
11	Southern Cal	133
12	Texas A&M	143
13	Alabama	160
14	Ohio St.	184
15	Auburn	198
16	Virginia	199
17	UCLA	234
18	Syracuse	254
19	Oklahoma	258

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Table 22 (continued)

Rank	Team	Points
20	Clemson	276
21	Michigan St.	283
22	Brigham Young	287
23	Arizona	287
24	Georgia	288
25	Oregon	291
26	Virginia Tech	296
27	Texas	298
28	Stanford	298
29	West Virginia	318
30	Illinois	319
31	Iowa	319
32	Texas Tech	325
33	Washington St.	329
34	Arizona St.	340
35	LSU	363
36	California	374
37	N. Carolina St.	385
38	North Carolina	392
39	Baylor	395
40	Indiana	397
41	South Carolina	398
42	Arkansas	399
43	Georgia Tech	417
44	Mississippi	423
45	Mississippi St.	456
46	Boston College	457
47	Air Force	484
48	Southern Miss.	489
49	Louisville	512
50	Wisconsin	514
51	Wyoming	515
52	East Carolina	527
53	Houston	531
54	San Diego St.	543
55	Fresno St.	551
56	Duke	564
57	Kansas St.	566

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Table 22 (continued)

Rank	Team	Points
58	Kansas	568
59	Memphis	570
60	Maryland	576
61	Purdue	577
62	Oklahoma St.	579
63	Colorado St.	584
64	Kentucky	592
65	Pittsburgh	593
66	Utah	598
67	Minnesota	618
68	Iowa St.	624
69	Marshall	624
70	Hawaii	629
71	Rice	648
72	Rutgers	666
73	Oregon St.	673
74	Texas Christian	679
75	Missouri	680
76	Army	690
77	Vanderbilt	695
78	Northwestern	704
79	Tulsa	714
80	Nevada	729
81	Georgia Southern	751
82	Idaho	755
83	Montana	755
84	Wake Forest	769
85	SW Louisiana	844
86	William & Mary	848
87	Delaware	855
88	Cent. Michigan	855
89	Louisiana Tech	857
90	San Jose St.	861
91	New Mexico	874
92	Ball St.	882
93	N. Iowa	884
94	Navy	886
95	Tulane	893

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Table 22 (continued)

Rank	Team	Points
96	Furman	904
97	Toledo	913
98	Youngstown St.	933
99	Cincinnati	935
100	W. Michigan	939
101	Bowling Green	945
102	James Madison	963
103	McNeese St.	971
104	Middle Tenn. St.	972
105	Utah St.	984
106	NE. Louisiana	989
107	Appalachian St.	992
108	New Hampshire	996
109	Temple	996
110	UTEP	1002
111	E. Kentucky	1005
112	Miami (Ohio)	1007
113	Stephen F. Austin	1016
114	Villanova	1055
115	N. Illinois	1058
116	SW Missouri St.	1081
117	Boise St.	1108
118	Massachusetts	1128
119	Connecticut	1130
120	Northwestern St.	1133
121	Weber St.	1142
122	E. Michigan	1147
123	Citadel	1169
124	North Texas	1170
125	N. Arizona	1180
126	Akron	1202
127	E. Washington	1210
128	E. Illinois	1222
129	Boston U.	1241
130	Arkansas St.	1244
131	W. Illinois	1263
132	Maine	1280
133	Illinois St.	1281

continued on next page

Table 22 (continued)

Rank	Team	Points
134	W. Kentucky	1285
135	Liberty	1287
136	Holy Cross	1288
137	Jackson St.	1288
138	Dartmouth	1299
139	UNLV	1299
140	Grambling	1308
141	Pennsylvania	1322
142	Indiana St.	1336
143	SW Texas St.	1349
144	Montana St.	1350
145	Tn.-Chattanooga	1356
146	Ohio U.	1360
147	W. Carolina	1361
148	New Mexico St.	1372
149	Princeton	1374
150	Sam Houston St.	1378
151	Lehigh	1384
152	Northeastern	1388
153	Lafayette	1403
154	Florida A&M	1409
155	Towson St.	1417
156	Nicholls St.	1428
157	E. Tennessee St.	1430
158	Richmond	1434
159	Southern	1439
160	Rhode Island	1444
161	Cornell	1447
162	Alabama St.	1453
163	Idaho St.	1467
164	Murray St.	1472
165	Howard	1478
166	Alcorn St.	1488
167	Kent	1496
168	Delaware St.	1526
169	S. Illinois	1529
170	S. Carolina St.	1552
171	Yale	1555

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Table 22 (continued)

Rank	Team	Points
172	Colgate	1575
173	N. Carolina A&T	1580
174	Va. Military	1590
175	Bucknell	1591
176	Tennessee Tech	1596
177	Harvard	1612
178	Tennessee St.	1619
179	Brown	1632
180	Columbia	1694
181	Bethune-Cookman	1727
182	Texas Southern	1731
183	Morehead St.	1753
184	Miss. Valley St.	1768
185	Austin Peay	1780
186	Morgan St.	1855

Table 23: Men's Basketball Team of the Decade (1989-1997)

Rank	Team	Points
1	Arizona	55
2	Kansas	62
3	North Carolina	81
4	Duke	87
5	Arkansas	132
6	Indiana	146
7	Syracuse	185
8	Georgetown	186
9	Connecticut	186
10	Kentucky	199
11	UCLA	204
12	Michigan	218
13	Oklahoma	220
14	Purdue	227
15	Oklahoma St.	249
16	Cincinnati	253
17	Virginia	256
18	Georgia Tech	262

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Table 23 (continued)

Rank	Team	Points
19	Illinois	265
20	Wake Forest	268
21	Minnesota	282
22	Iowa	288
23	Louisville	299
24	Michigan St.	306
25	Providence	315
26	Missouri	319
27	Villanova	323
28	Georgia	350
29	Temple	358
30	Alabama	365
31	Iowa St.	369
32	Maryland	379
33	Florida St.	387
34	Stanford	396
35	Seton Hall	397
36	Texas	418
37	Vanderbilt	420
38	St. John's	421
39	Clemson	430
40	Memphis	435
41	Pittsburgh	451
42	California	465
43	Utah	473
44	N. Carolina St.	476
45	New Mexico	486
46	Nebraska	508
47	Massachusetts	509
48	Ohio St.	514
49	Marquette	522
50	Wisconsin	532
51	West Virginia	542
52	Florida	545
53	Xavier (Ohio)	560
54	Boston College	581
55	LSU	588
56	UNLV	605

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Table 23 (continued)

Rank	Team	Points
57	Washington St.	608
58	Kansas St.	625
59	DePaul	643
60	Mississippi St.	646
61	Ala.-Birmingham	653
62	Penn St.	656
63	Southern Cal	675
64	Notre Dame	689
65	New Mexico St.	694
66	Tulsa	696
67	Brigham Young	701
68	Arizona St.	716
69	Miami (Ohio)	726
70	UTEP	734
71	South Carolina	747
72	Evansville	752
73	Auburn	757
74	N.C. Charlotte	758
75	St. Louis	772
76	Tennessee	772
77	SW Missouri St.	773
78	Colorado	797
79	Rutgers	801
80	Hawaii	810
81	New Orleans	829
82	Oregon	839
83	Texas Tech	850
84	Rhode Island	855
85	Ball St.	860
86	Southern Miss.	863
87	Oregon St.	868
88	Colorado St.	871
89	Washington	886
90	Wyoming	896
91	Virginia Tech	896
92	Mississippi	908
93	S. Illinois	908
94	Wis.-Green Bay	911

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Table 23 (continued)

Rank	Team	Points
95	Houston	920
96	George Washington	935
97	La Salle	937
98	St. Joseph's (Pa.)	972
99	Old Dominion	986
100	Long Beach St.	987
101	Fresno St.	990
102	Pacific	1008
103	W. Kentucky	1013
104	Princeton	1020
105	UC Santa Barbara	1025
106	Virginia Commonwealth	1026
107	E. Michigan	1035
108	Santa Clara	1036
109	Ohio U.	1049
110	Miami (Fla.)	1059
111	Illinois St.	1060
112	Utah St.	1073
113	Bowling Green	1074
114	Rice	1090
115	Bradley	1094
116	South Alabama	1101
117	Pepperdine	1115
118	Duquesne	1140
119	Gonzaga	1140
120	James Madison	1143
121	Butler	1154
122	Texas Christian	1160
123	Montana	1168
124	South Florida	1174
125	Tn.-Chattanooga	1203
126	SW Louisiana	1203
127	Richmond	1215
128	Murray St.	1217
129	Northwestern	1246
130	Dayton	1247
131	N. Iowa	1254
132	Weber St.	1263

continued on next page

Table 23 (continued)

Rank	Team	Points
133	Creighton	1266
134	Siena	1269
135	Texas A&M	1275
136	Idaho	1277
137	Boise St.	1286
138	Detroit	1294
139	Louisiana Tech	1295
140	Baylor	1296
141	Drexel	1305
142	Southern Meth.	1306
143	San Diego	1312
144	Nevada	1316
145	Pennsylvania	1326
146	St. Mary's (Cal.)	1333
147	Ark.-Little Rock	1334
148	Wichita St.	1339
149	Manhattan	1347
150	E. Tennessee St.	1352
151	Kent	1354
152	Ill.-Chicago	1366
153	Arkansas St.	1371
154	NE. Louisiana	1373
155	Toledo	1378
156	Cal St.-Fullerton	1385
157	Loyola Marymount	1387
158	W. Michigan	1396
159	San Diego St.	1449
160	San Francisco	1488
161	Iona	1495
162	Delaware	1496
163	N.C.-Wilmington	1505
164	N. Illinois	1506
165	Montana St.	1515
166	St. Bonaventure	1536
167	Drake	1539
168	Coppin St.	1542
169	Canisius	1549
170	St. Peter's	1580

continued on next page

Table 23 (continued)

Rank	Team	Points
171	Marshall	1580
172	East Carolina	1591
173	Wright St.	1596
174	Air Force	1598
175	UC Irvine	1599
176	Indiana St.	1602
177	Lamar	1604
178	American U.	1623
179	San Jose St.	1629
180	Towson St.	1633
181	Fordham	1634
182	Jacksonville	1643
183	Cleveland St.	1653
184	Bucknell	1656
185	Holy Cross	1675
186	Monmouth (N.J.)	1682
187	Akron	1706
188	Southern Utah	1710
189	Davidson	1721
190	Appalachian St.	1724
191	Loyola (Ill.)	1725
192	Boston U.	1726
193	Southern	1731
194	Middle Tenn. St.	1735
195	Austin Peay	1746
196	Valparaiso	1767
197	Hartford	1771
198	Furman	1788
199	Texas-San Antonio	1793
200	Portland	1806
201	Northeastern	1806
202	Fairfield	1818
203	Georgia Southern	1850
204	George Mason	1854
205	Rider	1855
206	Idaho St.	1864
207	Cent. Michigan	1868
208	Texas Southern	1868

continued on next page

Table 23 (continued)

Rank	Team	Points
209	Texas-Pan American	1873
210	Loyola (Md.)	1884
211	Tennessee Tech	1888
212	E. Illinois	1893
213	E. Kentucky	1897
214	Maine	1918
215	Jackson St.	1923
216	North Texas	1930
217	McNeese St.	1933
218	Stetson	1933
219	W. Illinois	1937
220	Niagara	1947
221	Mount St. Mary's (Md.)	1949
222	William & Mary	1972
223	Fairleigh Dickinson	1976
224	W. Carolina	1980
225	Robert Morris	1984
226	Hofstra	1996
227	Liberty	1998
228	Coastal Carolina	2002
229	Marist	2003
230	Tennessee St.	2004
231	Colgate	2013
232	Navy	2015
233	SW Texas St.	2018
234	St. Francis (Pa.)	2045
235	Dartmouth	2049
236	Nicholls St.	2091
237	Yale	2093
238	E. Washington	2096
239	Miss. Valley St.	2098
240	Radford	2108
241	Georgia St.	2112
242	Vermont	2127
243	Citadel	2130
244	Samford	2132
245	Va. Military	2132
246	Morehead St.	2149

continued on next page

Table 23 (continued)

Rank	Team	Points
247	N. Arizona	2153
248	Texas-Arlington	2158
249	S. Carolina St.	2163
250	Stephen F. Austin	2164
251	Wagner College	2166
252	Charleston Southern	2168
253	Florida Int'l	2176
254	Northwestern St.	2177
255	Centenary (La.)	2184
256	Harvard	2184
257	Cornell	2189
258	Lehigh	2194
259	Campbell	2204
260	Cent. Florida	2223
261	Lafayette	2240
262	New Hampshire	2244
263	Mercer	2254
264	Alabama St.	2262
265	N.C.-Asheville	2269
266	N. Carolina A&T	2296
267	Long Island U.	2301
268	Brown	2304
269	Sam Houston St.	2324
270	Columbia	2333
271	Youngstown St.	2350
272	Md.-Baltimore County	2362
273	Florida A&M	2411
274	Grambling	2424
275	St. Francis (N.Y.)	2425
276	Winthrop	2438
277	Army	2444
278	Alcorn St.	2461
279	Howard	2485
280	Delaware St.	2506
281	Bethune-Cookman	2510
282	Chicago St.	2534
283	Morgan St.	2534
284	Md.-E. Shore	2544

continued on next page

Table 23 (continued)

Rank	Team	Points
285	Cent. Connecticut St.	2546
286	Prairie View A&M	2646

Table 24: Women's Basketball Team of the Decade (1989-1997)

Rank	Team	Points
1	Tennessee	20
2	Stanford	22
3	Virginia	81
4	Purdue	114
5	Louisiana Tech	116
6	Vanderbilt	119
7	Iowa	132
8	Penn St.	149
9	Auburn	153
10	Georgia	163
11	Texas	185
12	Washington	193
13	Texas Tech	194
14	Connecticut	194
15	Colorado	210
16	Clemson	252
17	W. Kentucky	254
18	Mississippi	258
19	N. Carolina St.	267
20	Alabama	269
21	Stephen F. Austin	291
22	Montana	297
23	Maryland	302
24	Ohio St.	319
25	Northwestern	322
26	Southern Cal	335
27	Kansas	335
28	North Carolina	375
29	Oregon	379
30	Oklahoma St.	385
31	Arkansas	392

continued on next page

Table 24 (continued)

Rank	Team	Points
32	Old Dominion	412
33	UCLA	414
34	Florida	435
35	Duke	461
36	Nebraska	464
37	Utah	474
38	Southern Miss.	477
39	Kentucky	480
40	Indiana	480
41	Michigan St.	483
42	LSU	490
43	Notre Dame	497
44	Oregon St.	506
45	Rutgers	516
46	SW Missouri St.	530
47	DePaul	533
48	Toledo	562
49	Georgia Tech	565
50	George Washington	566
51	Hawaii	579
52	South Carolina	580
53	Wisconsin	588
54	San Diego St.	590
55	St. Joseph's (Pa.)	591
56	Texas A&M	607
57	Washington St.	631
58	Miami (Fla.)	640
59	California	649
60	Missouri	655
61	Providence	657
62	Seton Hall	669
63	Arizona	672
64	Illinois	674
65	S. Illinois	689
66	Louisville	706
67	Wake Forest	720
68	Bowling Green	723
69	UNLV	757

continued on next page

Table 24 (continued)

Rank	Team	Points
70	Florida St.	768
71	Arkansas St.	774
72	Kansas St.	781
73	Florida Int'l	782
74	N. Illinois	795
75	Houston	797
76	Oklahoma	802
77	UC Santa Barbara	807
78	Illinois St.	817
79	Creighton	832
80	James Madison	833
81	Tennessee Tech	834
82	Wis.-Green Bay	836
83	Santa Clara	837
84	San Francisco	843
85	Southern Meth.	850
86	Villanova	852
87	Arizona St.	853
88	Long Beach St.	853
89	Northwestern St.	857
90	St. Mary's (Cal.)	866
91	Miami (Ohio)	879
92	Maine	906
93	Drake	917
94	La Salle	924
95	Ala.-Birmingham	925
96	West Virginia	932
97	New Mexico St.	935
98	Minnesota	935
99	New Orleans	939
100	Memphis	944
101	Middle Tenn. St.	958
102	Virginia Tech	968
103	N.C. Charlotte	972
104	SW Texas St.	978
105	Georgetown	981
106	Michigan	984
107	Boise St.	985

continued on next page

Table 24 (continued)

Rank	Team	Points
108	Montana St.	989
109	Kent	1000
110	Lamar	1038
111	St. John's	1039
112	Pittsburgh	1041
113	Butler	1048
114	Pacific	1054
115	Rice	1065
116	Tulane	1069
117	Pepperdine	1076
118	Boston College	1087
119	Mississippi St.	1090
120	Fresno St.	1094
121	Wyoming	1098
122	Iowa St.	1098
123	St. Peter's	1112
124	Portland	1116
125	Brigham Young	1116
126	Holy Cross	1147
127	Syracuse	1156
128	Richmond	1166
129	Grambling	1169
130	Marquette	1179
131	Bradley	1184
132	Colorado St.	1191
133	Cal St.-Fullerton	1198
134	Appalachian St.	1214
135	E. Kentucky	1215
136	NE. Louisiana	1224
137	San Diego	1225
138	Detroit	1235
139	Xavier (Ohio)	1239
140	Alcorn St.	1247
141	Wichita St.	1252
142	Ohio U.	1281
143	Weber St.	1282
144	Indiana St.	1282
145	Baylor	1285

continued on next page

Table 24 (continued)

Rank	Team	Points
146	Virginia Commonwealth	1296
147	Vermont	1301
148	Fairfield	1313
149	George Mason	1319
150	Texas-Arlington	1326
151	Tn.-Chattanooga	1343
152	Youngstown St.	1353
153	Furman	1369
154	Cent. Michigan	1379
155	Cincinnati	1384
156	Georgia Southern	1387
157	UTEP	1388
158	Gonzaga	1414
159	Harvard	1435
160	Idaho	1444
161	Rhode Island	1448
162	Massachusetts	1449
163	South Florida	1476
164	South Alabama	1478
165	W. Michigan	1490
166	Dayton	1495
167	Marshall	1517
168	St. Bonaventure	1523
169	Temple	1542
170	SE Louisiana	1543
171	Siena	1546
172	Sam Houston St.	1561
173	New Hampshire	1562
174	Mount St. Mary's (Md.)	1573
175	Tennessee St.	1584
176	Fordham	1591
177	North Texas	1603
178	East Carolina	1613
179	Duquesne	1623
180	Brown	1624
181	Dartmouth	1632
182	Murray St.	1636
183	Loyola Marymount	1636

continued on next page

Table 24 (continued)

Rank	Team	Points
184	E. Washington	1637
185	Idaho St.	1644
186	Valparaiso	1647
187	UC Irvine	1664
188	Texas Christian	1684
189	E. Illinois	1691
190	N. Arizona	1711
191	Radford	1712
192	McNeese St.	1714
193	American U.	1717
194	Southern Utah	1719
195	Manhattan	1734
196	Loyola (Ill.)	1736
197	N. Iowa	1756
198	Evansville	1771
199	Ball St.	1788
200	Princeton	1792
201	W. Illinois	1797
202	Mercer	1800
203	Morehead St.	1801
204	E. Michigan	1809
205	William & Mary	1809
206	Jackson St.	1810
207	Boston U.	1815
208	Delaware	1840
209	Florida A&M	1844
210	Stetson	1844
211	E. Tennessee St.	1854
212	Canisius	1867
213	Ill.-Chicago	1873
214	Campbell	1873
215	San Jose St.	1873
216	Austin Peay	1879
217	Miss. Valley St.	1893
218	Cent. Florida	1905
219	Nevada	1910
220	Northeastern	1913
221	Georgia St.	1923

continued on next page

Table 24 (continued)

Rank	Team	Points
222	Texas-San Antonio	1923
223	Howard	1936
224	Yale	1945
225	Lafayette	1971
226	Wright St.	1974
227	Cleveland St.	1978
228	Loyola (Md.)	1978
229	Akron	2030
230	Pennsylvania	2041
231	St. Francis (Pa.)	2046
232	Niagara	2050
233	Hartford	2059
234	Wagner College	2116
235	Southern	2119
236	S. Carolina St.	2127
237	N. Carolina A&T	2131
238	Rider	2132
239	Drexel	2134
240	Towson St.	2161
241	Bucknell	2195
242	Alabama St.	2210
243	N.C.-Wilmington	2220
244	Fairleigh Dickinson	2224
245	W. Carolina	2232
246	St. Louis	2232
247	Monmouth (N.J.)	2233
248	Iona	2239
249	Marist	2249
250	Liberty	2253
251	SW Louisiana	2262
252	Nicholls St.	2264
253	Cornell	2265
254	Colgate	2271
255	Cent. Connecticut St.	2272
256	Lehigh	2278
257	Md.-Baltimore County	2291
258	Texas Southern	2292
259	Robert Morris	2302

continued on next page

Table 24 (continued)

Rank	Team	Points
260	Coppin St.	2309
261	Texas-Pan American	2322
262	Hofstra	2329
263	Columbia	2361
264	Delaware St.	2367
265	N.C.-Asheville	2412
266	Morgan St.	2434
267	Long Island U.	2437
268	Md.-E. Shore	2446
269	Coastal Carolina	2461
270	Bethune-Cookman	2461
271	Winthrop	2467
272	Chicago St.	2506
273	Charleston Southern	2508
274	St. Francis (N.Y.)	2509
275	Prairie View A&M	2514

5.2.3.3 How Accuracy Changes as the Season Progresses. To show how the accuracy in a sport changes over time, I looked at the accuracy of the most accurate method for an arbitrarily selected year, 1996-1997. Figures 13-15 show that accuracy is pretty steady for the Most Accurate model in each sport, and starting at about 20-30%, the model with No Start and No Home starts to parallel the Most Accurate model. The last data point for each graph typically represents Bowl games or Post-season tournament games.

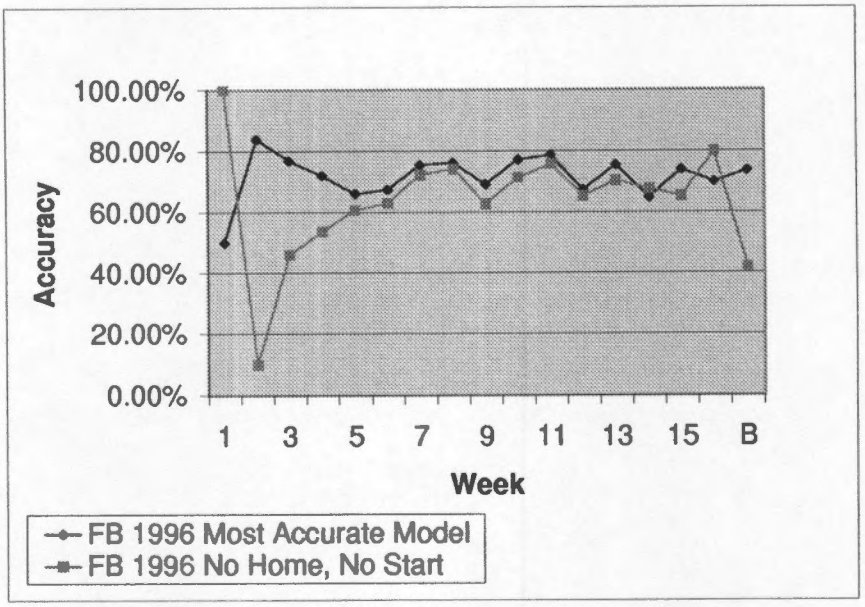


Figure 13 1996 Football Accuracy Over Time

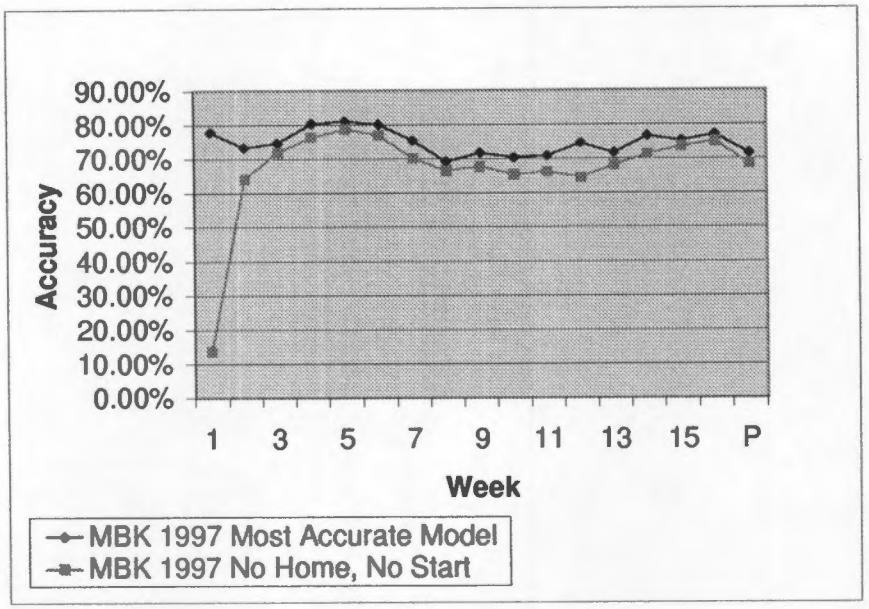


Figure 14 1996-1997 Men's Basketball Accuracy Over Time

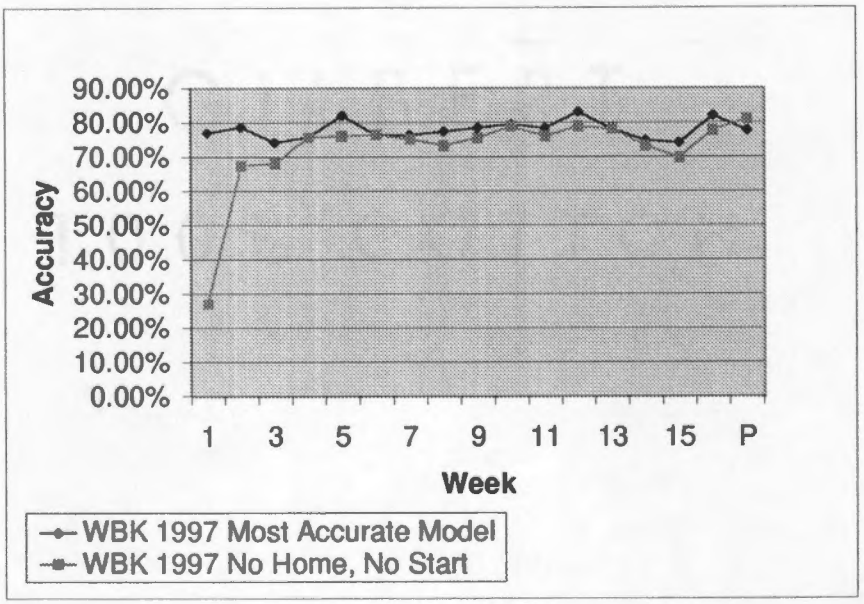


Figure 15 1996-1997 Women's Basketball Accuracy Over Time

5.3 Summary

In this chapter, I have used Operating Curves to show that the accuracy associated with a P.W.M. in Men's or Women's Basketball is virtually the same. The number of "close" games played in Men's versus Women's Basketball, approximately 12 percent more for Men's Basketball, is what accounts for their difference in accuracy. I then discussed how Depth and Strength of Schedule in Basketball is closely tied to the number of "close games." I also proposed three criteria for evaluating tournament selections: 1) rank correlation of the n teams selected to the tournament with the top n teams of the best rating system; 2) the "selection index" of the teams selected to the tournament; and 3) determining if the regions were evenly balanced. I applied these three criteria to select the at-large teams and seed the teams of the 1993 Women's Basketball Tournament. This revised selection procedure showed an improvement in all three areas: rank correlation, selection index, and regional balance. Finally, I considered other miscellaneous applications of rating systems: Yearly Top 25 teams, Selecting the team of the decade for each sport, and How accuracy changes as the season progresses.

Chapter VI. Summary and Conclusions

Least Squares (L.S.) and Mean Absolute Deviation (M.A.D.) are the two approaches used in this research to find team ratings that best explain the game results observed in a season. This research looks at three NCAA sports (Football, Men's Basketball, and Women's Basketball) and compares Least Squares and Mean Absolute Deviation approaches using the three ten-year data sets. For Football the data used was for the 1987-1996 seasons, while for Men's and Women's Basketball it was for the 1988-1997 seasons.

Chapter II showed that studies looking at the NCAA sports studied in this research are, for the most part, non-longitudinal and have not included women's sports. With the exception of Stefani ([1977], [1980], and [1987]), most papers focus on a one-year data set. Table 1 on page 4 summarizes past data sets. Of the research methods used in past research, Least Squares has consistently been one of the most successful in terms of accuracy [predicting game winners]. However, despite Least Squares' success, a non-research method, the betting line, typically outperforms Least Squares in terms of accuracy. Another limitation of Least Squares is the excessive impact outlying values have on the ratings. The rationale for using Mean Absolute Deviation is that its outlying values should not have too much impact on ratings.

In Chapter III, I developed the basic L.S. and M.A.D. models to find team ratings that best explain the results observed during a season. I showed the conditions required for obtaining a unique solution to each method. Then, I showed that the Least Squares formulation can be solved using a matrix iterative method, Gauss-Seidel, while the Mean Absolute Deviation model is a linear program that can be solved with any linear programming solver. In this chapter I also presented the methods used to incorporate the enhancements: Scaling of Differences, Start-of-Season Ratings, Home Edge, and Time Discounting. Table 2

on page 28 summarizes the values used for each of these enhancements. I implemented 87 out of a possible 240 combinations of the enhancements (Appendix A). Of the four types of enhancements applied to the basic L.S. and M.A.D. models, three of these four are new ways of modeling these enhancements: Adjusted Average Home Edge (Home Edge), quasi-Bayesian (Start-of-Season Ratings), and the Time Discounting enhancements.

Chapter IV summarizes the results of modeling game results using L.S. and M.A.D.. In all three sports, the most accurate L.S. model outperformed the most accurate M.A.D. model in terms of accuracy. The most accurate model in Football predicted game results 72.74% accurately, in Men's Basketball 74.61%, and in Women's Basketball 78.90%. Table 3 on page 45 shows the enhancements used by the most accurate models.

An Adjusted Average Home advantage and Starting Ratings were enhancements that were common in all most accurate models. In five of these six most accurate models, the Starting Ratings were regressed to the mean; only for L.S. Football were the Starting Ratings not regressed to the mean. For both Men's and Women's Basketball, the regressed factor was 0.90.

The other two types of enhancements considered in this study were Time Discounting of early vs. late games and Scaling of Differences in game scores. Time Discounting was only important for L.S. Football and Men's Basketball. In three of the six (M.A.D. Football, L.S. Men's Basketball, and L.S. Women's Basketball) models, adjustments were made to the winning margin, although all three used different factors: 0.50, 0.75, and 0.90, respectively. Women's Basketball was the only sport for which time discounting didn't appear in the set of enhancements of the two most accurate models.

The most accurate Women's Basketball model was more accurate by more than four percent than the most accurate Men's Basketball model. In Chapter V, I showed that the number of "close" games played in Men's is approximately 12

percent more than in Women's Basketball. This accounts for their difference in accuracy. A surprising discovery, despite Men's Basketball lower accuracy, is that given a Predicted Winning Margin (P.W.M.) for a basketball game, Men's or Women's, the accuracy associated with that P.W.M. is virtually identical. Operating Curves are used to show this relationship between P.W.M. and accuracy. In this chapter, I also discuss how Depth and Strength of Schedule in Basketball are closely tied to the number of "close games" played.

Another application of rating systems is to use these to evaluate post-season tournament selections. I proposed three criteria for evaluating tournament selections: 1) rank correlation of the n teams selected to the tournament with the top n teams of the best rating system; 2) the "selection index" of the teams selected to the tournament; and 3) determining if the regions were evenly balanced. I applied these three criteria to select the at-large teams and seed the teams of the 1993 Women's Basketball Tournament. This revised selection procedure showed an improvement in all three areas: rank correlation, selection index, and regional balance.

Finally, I considered other miscellaneous applications of rating systems: Yearly Top 25 teams, Selecting the team of the decade for each sport, and How accuracy changes as the season progresses.

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Appendix

Appendix A. Combination of Enhancements Implemented

Table 25: List of Combinations of Enhancements Implemented

	Combination of Enhancements
1	Ave. Home, No Start)
2	Ave. Home, No Start, Time(0.85)
3	Ave. Home, No Start, Time(0.90)
4	Ave. Home, No Start, Time(0.95)
5	Ave. Home, No Start, Ones)
6	Ave. Home, No Start, Scale(0.50)
7	Ave. Home, No Start, Scale(0.75)
8	Ave. Home, No Start, Scale(0.90)
9	Ave. Home, Start)
10	Ave. Home, Start(0.90)
11	Ave. Home, Start(0.90), Time(0.85)
12	Ave. Home, Start(0.90), Time(0.90)
13	Ave. Home, Start(0.90), Time(0.95)
14	Ave. Home, Start(0.90), Scale(0.50)
15	Ave. Home, Start(0.90), Scale(0.75)
16	Ave. Home, Start(0.90), Scale(0.90)
17	Ave. Home, Start(0.95)
18	Ave. Home, Start(0.95), Time(0.85)
19	Ave. Home, Start(0.95), Time(0.90)
20	Ave. Home, Start(0.95), Time(0.95)
21	Ave. Home, Start(0.95), Scale(0.50)
22	Ave. Home, Start(0.95), Scale(0.75)
23	Ave. Home, Start(0.95), Scale(0.90)
24	Ave. Home, Start, Time(0.85)
25	Ave. Home, Start, Time(0.90)
26	Ave. Home, Start, Time(0.95)
27	Ave. Home, Start, Scale(0.50)
28	Ave. Home, Start, Scale(0.75)
29	Ave. Home, Start, Scale(0.90)
30	Adj. Ave. Home, No Start)
31	Adj. Ave. Home, No Start, Time(0.85)
32	Adj. Ave. Home, No Start, Time(0.90)
33	Adj. Ave. Home, No Start, Time(0.95)

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	Combination of Enhancements
34	Adj. Ave. Home, No Start, Ones)
35	Adj. Ave. Home, No Start, Scale(0.50)
36	Adj. Ave. Home, No Start, Scale(0.75)
37	Adj. Ave. Home, No Start, Scale(0.90)
38	Adj. Ave. Home, Start)
39	Adj. Ave. Home, Start(0.90)
40	Adj. Ave. Home, Start(0.90), Time(0.85)
41	Adj. Ave. Home, Start(0.90), Time(0.90)
42	Adj. Ave. Home, Start(0.90), Time(0.95)
43	Adj. Ave. Home, Start(0.90), Scale(0.50)
44	Adj. Ave. Home, Start(0.90), Scale(0.75)
45	Adj. Ave. Home, Start(0.90), Scale(0.90)
46	Adj. Ave. Home, Start(0.95)
47	Adj. Ave. Home, Start(0.95), Time(0.85)
48	Adj. Ave. Home, Start(0.95), Time(0.90)
49	Adj. Ave. Home, Start(0.95), Time(0.95)
50	Adj. Ave. Home, Start(0.95), Scale(0.50)
51	Adj. Ave. Home, Start(0.95), Scale(0.75)
52	Adj. Ave. Home, Start(0.95), Scale(0.90)
53	Adj. Ave. Home, Start, Time(0.85)
54	Adj. Ave. Home, Start, Time(0.90)
55	Adj. Ave. Home, Start, Time(0.95)
56	Adj. Ave. Home, Start, Scale(0.50)
57	Adj. Ave. Home, Start, Scale(0.75)
58	Adj. Ave. Home, Start, Scale(0.90)
59	No Home, No Start)
60	No Home, No Start), Time(0.85)
61	No Home, No Start), Time(0.90)
62	No Home, No Start), Time(0.95)
63	No Home, No Start, Ones)
64	No Home, No Start), Scale(0.50)
65	No Home, No Start), Scale(0.75)
66	No Home, No Start), Scale(0.90)
67	No Home, Start)
68	No Home, Start(0.90)
69	No Home, Start(0.90), Time(0.85)
70	No Home, Start(0.90), Time(0.90)
71	No Home, Start(0.90), Time(0.95)

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Combination of Enhancements	
72	No Home, Start(0.90), Scale(0.50)
73	No Home, Start(0.90), Scale(0.75)
74	No Home, Start(0.90), Scale(0.90)
75	No Home, Start(0.95)
76	No Home, Start(0.95), Time(0.85)
77	No Home, Start(0.95), Time(0.90)
78	No Home, Start(0.95), Time(0.95)
79	No Home, Start(0.95), Scale(0.50)
80	No Home, Start(0.95), Scale(0.75)
81	No Home, Start(0.95), Scale(0.90)
82	No Home, Start, Time(0.85)
83	No Home, Start, Time(0.90)
84	No Home, Start, Time(0.95)
85	No Home, Start, Scale(0.50)
86	No Home, Start, Scale(0.75)
87	No Home, Start, Scale(0.90)

Appendix B. Summary of Runs

B.1 Least Squares

Table 26: 1987-1988 Least Squares Results

	Enhancements			FB 1987 *Accuracy* *#Correct(%)*	MBK 1987-1988 *Accuracy* *#Correct(%)*	WBK 1987-1988 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		658 (64.20%)	2967 (73.19%)	2899 (77.51%)
2	ave.	no start		658 (64.20%)	2979 (73.48%)	2903 (77.62%)
3	no home	no start		615 (60.00%)	2783 (68.65%)	2754 (73.64%)
4	adj. ave.	no start	exp(.85)	655 (63.90%)	2966 (73.16%)	2882 (77.06%)
5	ave.	no start	exp(.85)	656 (64.00%)	2949 (72.74%)	2908 (77.75%)
6	no home	no start	exp(.85)	619 (60.39%)	2743 (67.66%)	2727 (72.91%)
7	adj. ave.	no start	exp(.90)	657 (64.10%)	2966 (73.16%)	2901 (77.57%)
8	ave.	no start	exp(.90)	661 (64.49%)	2961 (73.04%)	2903 (77.62%)
9	no home	no start	exp(.90)	617 (60.20%)	2770 (68.33%)	2742 (73.32%)
10	adj. ave.	no start	exp(.95)	659 (64.29%)	2970 (73.26%)	2900 (77.54%)
11	ave.	no start	exp(.95)	660 (64.39%)	2974 (73.36%)	2914 (77.91%)
12	no home	no start	exp(.95)	614 (59.90%)	2774 (68.43%)	2752 (73.58%)
13	adj. ave.	no start	ones	645 (62.93%)	2885 (71.16%)	2771 (74.09%)
14	ave.	no start	ones	645 (62.93%)	2895 (71.41%)	2771 (74.09%)
15	no home	no start	ones	599 (58.44%)	2672 (65.91%)	2635 (70.45%)
16	adj. ave.	no start	pow(.50)	655 (63.90%)	2963 (73.09%)	2876 (76.90%)
17	ave.	no start	pow(.50)	655 (63.90%)	2965 (73.14%)	2877 (76.93%)
18	no home	no start	pow(.50)	619 (60.39%)	2761 (68.11%)	2756 (73.69%)

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	Enhancements			FB 1987 *Accuracy #Correct(%)*	MBK 1987-1988 *Accuracy #Correct(%)*	WBK 1987-1988 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	665 (64.88%)	2978 (73.46%)	2885 (77.14%)
20	ave.	no start	pow(.75)	666 (64.98%)	2959 (72.99%)	2895 (77.41%)
21	no home	no start	pow(.75)	624 (60.88%)	2768 (68.28%)	2757 (73.72%)
22	adj. ave.	no start	pow(.90)	659 (64.29%)	2978 (73.46%)	2899 (77.51%)
23	ave.	no start	pow(.90)	659 (64.29%)	2967 (73.19%)	2901 (77.57%)
24	no home	no start	pow(.90)	619 (60.39%)	2775 (68.45%)	2765 (73.93%)

Table 27: 1988-1989 Least Squares Results

	Enhancements			FB 1988 *Accuracy* *#Correct(%)*	MBK 1988-1989 *Accuracy* *#Correct(%)*	WBK 1988-1989 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		715 (68.62%)	3046 (73.50%)	2958 (77.21%)
2	ave.	no start		717 (68.81%)	3029 (73.09%)	2965 (77.39%)
3	no home	no start		679 (65.16%)	2868 (69.21%)	2838 (74.08%)
4	adj. ave.	no start	exp(.85)	706 (67.75%)	3009 (72.61%)	2964 (77.37%)
5	ave.	no start	exp(.85)	706 (67.75%)	3008 (72.59%)	2964 (77.37%)
6	no home	no start	exp(.85)	680 (65.26%)	2822 (68.10%)	2828 (73.82%)
7	adj. ave.	no start	exp(.90)	716 (68.71%)	3024 (72.97%)	2972 (77.58%)
8	ave.	no start	exp(.90)	716 (68.71%)	3029 (73.09%)	2978 (77.73%)
9	no home	no start	exp(.90)	679 (65.16%)	2861 (69.04%)	2842 (74.18%)
10	adj. ave.	no start	exp(.95)	716 (68.71%)	3028 (73.07%)	2969 (77.50%)
11	ave.	no start	exp(.95)	717 (68.81%)	3024 (72.97%)	2975 (77.66%)
12	no home	no start	exp(.95)	677 (64.97%)	2873 (69.33%)	2842 (74.18%)
13	adj. ave.	no start	ones	685 (65.74%)	2975 (71.79%)	2867 (74.84%)
14	ave.	no start	ones	689 (66.12%)	2961 (71.45%)	2861 (74.68%)
15	no home	no start	ones	650 (62.38%)	2762 (66.65%)	2719 (70.97%)
16	adj. ave.	no start	pow(.50)	719 (69.00%)	3028 (73.07%)	2954 (77.11%)
17	ave.	no start	pow(.50)	721 (69.19%)	3012 (72.68%)	2940 (76.74%)
18	no home	no start	pow(.50)	687 (65.93%)	2832 (68.34%)	2833 (73.95%)

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	Enhancements			FB 1988 *Accuracy* *#Correct(%)*	MBK 1988-1989 *Accuracy* *#Correct(%)*	WBK 1988-1989 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	719 (69.00%)	3044 (73.46%)	2954 (77.11%)
20	ave.	no start	pow(.75)	721 (69.19%)	3032 (73.17%)	2955 (77.13%)
21	no home	no start	pow(.75)	678 (65.07%)	2864 (69.11%)	2839 (74.11%)
22	adj. ave.	no start	pow(.90)	717 (68.81%)	3043 (73.43%)	2965 (77.39%)
23	ave.	no start	pow(.90)	719 (69.00%)	3033 (73.19%)	2961 (77.29%)
24	no home	no start	pow(.90)	676 (64.88%)	2865 (69.14%)	2846 (74.29%)
25	adj. ave.	start		760 (72.94%)	3108 (75.00%)	3073 (80.21%)
26	ave.	start		747 (71.69%)	3081 (74.35%)	3069 (80.11%)
27	no home	start		761 (73.03%)	2987 (72.08%)	2995 (78.18%)
28	adj. ave.	start	exp(.85)	768 (73.70%)	3056 (73.75%)	3046 (79.51%)
29	ave.	start	exp(.85)	751 (72.07%)	3046 (73.50%)	3046 (79.51%)
30	no home	start	exp(.85)	760 (72.94%)	2920 (70.46%)	2948 (76.95%)
31	adj. ave.	start	exp(.90)	763 (73.22%)	3087 (74.49%)	3068 (80.08%)
32	ave.	start	exp(.90)	756 (72.55%)	3068 (74.03%)	3072 (80.19%)
33	no home	start	exp(.90)	764 (73.32%)	2960 (71.43%)	2974 (77.63%)
34	adj. ave.	start	exp(.95)	761 (73.03%)	3103 (74.88%)	3075 (80.27%)
35	ave.	start	exp(.95)	750 (71.98%)	3073 (74.16%)	3072 (80.19%)
36	no home	start	exp(.95)	760 (72.94%)	2987 (72.08%)	2994 (78.15%)
37	adj. ave.	start	pow(.50)	767 (73.61%)	3082 (74.37%)	3066 (80.03%)

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	Enhancements			FB 1988 *Accuracy* *#Correct(%)*	MBK 1988-1989 *Accuracy* *#Correct(%)*	WBK 1988-1989 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	768 (73.70%)	3071 (74.11%)	3066 (80.03%)
39	no home	start	pow(.50)	768 (73.70%)	2960 (71.43%)	2984 (77.89%)
40	adj. ave.	start	pow(.75)	762 (73.13%)	3099 (74.78%)	3073 (80.21%)
41	ave.	start	pow(.75)	761 (73.03%)	3082 (74.37%)	3072 (80.19%)
42	no home	start	pow(.75)	763 (73.22%)	2967 (71.60%)	3005 (78.44%)
43	adj. ave.	start	pow(.90)	762 (73.13%)	3099 (74.78%)	3070 (80.14%)
44	ave.	start	pow(.90)	754 (72.36%)	3084 (74.42%)	3073 (80.21%)
45	no home	start	pow(.90)	762 (73.13%)	2984 (72.01%)	3003 (78.39%)
46	adj. ave.	start(.90)		760 (72.94%)	3108 (75.00%)	3073 (80.21%)
47	ave.	start(.90)		747 (71.69%)	3081 (74.35%)	3069 (80.11%)
48	no home	start(.90)		756 (72.55%)	2978 (71.86%)	2997 (78.23%)
49	adj. ave.	start(.90)	exp(.85)	765 (73.42%)	3058 (73.79%)	3045 (79.48%)
50	ave.	start(.90)	exp(.85)	747 (71.69%)	3048 (73.55%)	3049 (79.59%)
51	no home	start(.90)	exp(.85)	761 (73.03%)	2927 (70.63%)	2953 (77.08%)
52	adj. ave.	start(.90)	exp(.90)	763 (73.22%)	3093 (74.64%)	3063 (79.95%)
53	ave.	start(.90)	exp(.90)	753 (72.26%)	3066 (73.99%)	3077 (80.32%)
54	no home	start(.90)	exp(.90)	767 (73.61%)	2964 (71.53%)	2973 (77.60%)
55	adj. ave.	start(.90)	exp(.95)	763 (73.22%)	3104 (74.90%)	3072 (80.19%)
56	ave.	start(.90)	exp(.95)	751 (72.07%)	3075 (74.20%)	3072 (80.19%)

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	Enhancements			FB 1988 *Accuracy* *#Correct(%)*	MBK 1988-1989 *Accuracy* *#Correct(%)*	WBK 1988-1989 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	760 (72.94%)	2981 (71.94%)	2993 (78.13%)
58	adj. ave.	start(.90)	pow(.50)	764 (73.32%)	3090 (74.57%)	3059 (79.85%)
59	ave.	start(.90)	pow(.50)	766 (73.51%)	3070 (74.08%)	3056 (79.77%)
60	no home	start(.90)	pow(.50)	764 (73.32%)	2953 (71.26%)	2976 (77.68%)
61	adj. ave.	start(.90)	pow(.75)	762 (73.13%)	3106 (74.95%)	3067 (80.06%)
62	ave.	start(.90)	pow(.75)	757 (72.65%)	3079 (74.30%)	3062 (79.93%)
63	no home	start(.90)	pow(.75)	763 (73.22%)	2969 (71.65%)	3000 (78.31%)
64	adj. ave.	start(.90)	pow(.90)	760 (72.94%)	3110 (75.05%)	3064 (79.98%)
65	ave.	start(.90)	pow(.90)	750 (71.98%)	3083 (74.40%)	3073 (80.21%)
66	no home	start(.90)	pow(.90)	764 (73.32%)	2979 (71.89%)	2997 (78.23%)
67	adj. ave.	start(.95)		760 (72.94%)	3108 (75.00%)	3073 (80.21%)
68	ave.	start(.95)		747 (71.69%)	3081 (74.35%)	3069 (80.11%)
69	no home	start(.95)		758 (72.74%)	2981 (71.94%)	2997 (78.23%)
70	adj. ave.	start(.95)	exp(.85)	764 (73.32%)	3058 (73.79%)	3043 (79.43%)
71	ave.	start(.95)	exp(.85)	750 (71.98%)	3042 (73.41%)	3048 (79.56%)
72	no home	start(.95)	exp(.85)	760 (72.94%)	2921 (70.49%)	2951 (77.03%)
73	adj. ave.	start(.95)	exp(.90)	762 (73.13%)	3091 (74.59%)	3065 (80.01%)
74	ave.	start(.95)	exp(.90)	753 (72.26%)	3069 (74.06%)	3073 (80.21%)

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	Enhancements			FB 1988 *Accuracy* *#Correct(%)*	MBK 1988-1989 *Accuracy* *#Correct(%)*	WBK 1988-1989 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	764 (73.32%)	2962 (71.48%)	2975 (77.66%)
76	adj. ave.	start(.95)	exp(.95)	762 (73.13%)	3105 (74.93%)	3077 (80.32%)
77	ave.	start(.95)	exp(.95)	749 (71.88%)	3072 (74.13%)	3072 (80.19%)
78	no home	start(.95)	exp(.95)	761 (73.03%)	2983 (71.98%)	2996 (78.20%)
79	adj. ave.	start(.95)	pow(.50)	767 (73.61%)	3085 (74.44%)	3064 (79.98%)
80	ave.	start(.95)	pow(.50)	768 (73.70%)	3073 (74.16%)	3063 (79.95%)
81	no home	start(.95)	pow(.50)	768 (73.70%)	2958 (71.38%)	2979 (77.76%)
82	adj. ave.	start(.95)	pow(.75)	765 (73.42%)	3099 (74.78%)	3067 (80.06%)
83	ave.	start(.95)	pow(.75)	758 (72.74%)	3079 (74.30%)	3064 (79.98%)
84	no home	start(.95)	pow(.75)	763 (73.22%)	2967 (71.60%)	2999 (78.28%)
85	adj. ave.	start(.95)	pow(.90)	759 (72.84%)	3104 (74.90%)	3069 (80.11%)
86	ave.	start(.95)	pow(.90)	752 (72.17%)	3082 (74.37%)	3073 (80.21%)
87	no home	start(.95)	pow(.90)	763 (73.22%)	2979 (71.89%)	3003 (78.39%)

Table 28: 1989-1990 Least Squares Results

	Enhancements			FB 1989 *Accuracy* *#Correct(%)*	MBK 1989-1990 *Accuracy* *#Correct(%)*	WBK 1989-1990 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		703 (67.40%)	3065 (73.87%)	2938 (76.15%)
2	ave.	no start		702 (67.31%)	3063 (73.83%)	2943 (76.28%)
3	no home	no start		660 (63.28%)	2822 (68.02%)	2862 (74.18%)
4	adj. ave.	no start	exp(.85)	700 (67.11%)	3037 (73.20%)	2930 (75.95%)
5	ave.	no start	exp(.85)	697 (66.83%)	3029 (73.01%)	2925 (75.82%)
6	no home	no start	exp(.85)	665 (63.76%)	2802 (67.53%)	2860 (74.13%)
7	adj. ave.	no start	exp(.90)	702 (67.31%)	3061 (73.78%)	2938 (76.15%)
8	ave.	no start	exp(.90)	700 (67.11%)	3059 (73.73%)	2943 (76.28%)
9	no home	no start	exp(.90)	661 (63.37%)	2828 (68.16%)	2880 (74.65%)
10	adj. ave.	no start	exp(.95)	708 (67.88%)	3064 (73.85%)	2945 (76.33%)
11	ave.	no start	exp(.95)	705 (67.59%)	3070 (73.99%)	2945 (76.33%)
12	no home	no start	exp(.95)	659 (63.18%)	2831 (68.23%)	2867 (74.31%)
13	adj. ave.	no start	ones	673 (64.53%)	3003 (72.38%)	2846 (73.77%)
14	ave.	no start	ones	670 (64.24%)	3002 (72.35%)	2849 (73.85%)
15	no home	no start	ones	643 (61.65%)	2737 (65.97%)	2730 (70.76%)
16	adj. ave.	no start	pow(.50)	698 (66.92%)	3064 (73.85%)	2943 (76.28%)
17	ave.	no start	pow(.50)	695 (66.63%)	3069 (73.97%)	2944 (76.31%)
18	no home	no start	pow(.50)	657 (62.99%)	2812 (67.78%)	2862 (74.18%)

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	Enhancements			FB 1989 *Accuracy #Correct(%)*	MBK 1989-1990 *Accuracy #Correct(%)*	WBK 1989-1990 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	705 (67.59%)	3076 (74.14%)	2944 (76.31%)
20	ave.	no start	pow(.75)	709 (67.98%)	3078 (74.19%)	2936 (76.10%)
21	no home	no start	pow(.75)	660 (63.28%)	2847 (68.62%)	2872 (74.44%)
22	adj. ave.	no start	pow(.90)	703 (67.40%)	3070 (73.99%)	2949 (76.44%)
23	ave.	no start	pow(.90)	702 (67.31%)	3061 (73.78%)	2944 (76.31%)
24	no home	no start	pow(.90)	661 (63.37%)	2827 (68.14%)	2860 (74.13%)
25	adj. ave.	start		759 (72.77%)	3097 (74.64%)	3040 (78.80%)
26	ave.	start		765 (73.35%)	3103 (74.79%)	3067 (79.50%)
27	no home	start		743 (71.24%)	2962 (71.39%)	3002 (77.81%)
28	adj. ave.	start	exp(.85)	756 (72.48%)	3055 (73.63%)	3021 (78.30%)
29	ave.	start	exp(.85)	760 (72.87%)	3068 (73.95%)	3032 (78.59%)
30	no home	start	exp(.85)	736 (70.57%)	2907 (70.07%)	2981 (77.27%)
31	adj. ave.	start	exp(.90)	764 (73.25%)	3070 (73.99%)	3042 (78.85%)
32	ave.	start	exp(.90)	763 (73.15%)	3096 (74.62%)	3057 (79.24%)
33	no home	start	exp(.90)	737 (70.66%)	2929 (70.60%)	2994 (77.60%)
34	adj. ave.	start	exp(.95)	762 (73.06%)	3095 (74.60%)	3054 (79.16%)
35	ave.	start	exp(.95)	760 (72.87%)	3109 (74.93%)	3066 (79.47%)
36	no home	start	exp(.95)	744 (71.33%)	2951 (71.13%)	3003 (77.84%)
37	adj. ave.	start	pow(.50)	757 (72.58%)	3103 (74.79%)	3041 (78.82%)

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	Enhancements			FB 1989 *Accuracy* *#Correct(%)*	MBK 1989-1990 *Accuracy* *#Correct(%)*	WBK 1989-1990 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	752 (72.10%)	3119 (75.17%)	3055 (79.19%)
39	no home	start	pow(.50)	747 (71.62%)	2946 (71.01%)	2976 (77.14%)
40	adj. ave.	start	pow(.75)	758 (72.67%)	3118 (75.15%)	3044 (78.90%)
41	ave.	start	pow(.75)	756 (72.48%)	3119 (75.17%)	3060 (79.32%)
42	no home	start	pow(.75)	752 (72.10%)	2963 (71.41%)	2990 (77.50%)
43	adj. ave.	start	pow(.90)	755 (72.39%)	3097 (74.64%)	3046 (78.95%)
44	ave.	start	pow(.90)	756 (72.48%)	3100 (74.72%)	3069 (79.55%)
45	no home	start	pow(.90)	745 (71.43%)	2950 (71.10%)	3005 (77.89%)
46	adj. ave.	start(.90)		759 (72.77%)	3097 (74.64%)	3040 (78.80%)
47	ave.	start(.90)		759 (72.77%)	3103 (74.79%)	3067 (79.50%)
48	no home	start(.90)		740 (70.95%)	2958 (71.29%)	3004 (77.86%)
49	adj. ave.	start(.90)	exp(.85)	756 (72.48%)	3057 (73.68%)	3022 (78.33%)
50	ave.	start(.90)	exp(.85)	754 (72.29%)	3072 (74.04%)	3037 (78.72%)
51	no home	start(.90)	exp(.85)	736 (70.57%)	2903 (69.97%)	2984 (77.35%)
52	adj. ave.	start(.90)	exp(.90)	757 (72.58%)	3077 (74.16%)	3042 (78.85%)
53	ave.	start(.90)	exp(.90)	760 (72.87%)	3097 (74.64%)	3057 (79.24%)
54	no home	start(.90)	exp(.90)	734 (70.37%)	2932 (70.67%)	2990 (77.50%)
55	adj. ave.	start(.90)	exp(.95)	756 (72.48%)	3098 (74.67%)	3059 (79.29%)
56	ave.	start(.90)	exp(.95)	765 (73.35%)	3104 (74.81%)	3063 (79.39%)

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	Enhancements			FB 1989 *Accuracy* *#Correct(%)*	MBK 1989-1990 *Accuracy* *#Correct(%)*	WBK 1989-1990 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	736 (70.57%)	2947 (71.03%)	3003 (77.84%)
58	adj. ave.	start(.90)	pow(.50)	761 (72.96%)	3111 (74.98%)	3043 (78.88%)
59	ave.	start(.90)	pow(.50)	754 (72.29%)	3123 (75.27%)	3060 (79.32%)
60	no home	start(.90)	pow(.50)	749 (71.81%)	2947 (71.03%)	2976 (77.14%)
61	adj. ave.	start(.90)	pow(.75)	754 (72.29%)	3121 (75.22%)	3051 (79.08%)
62	ave.	start(.90)	pow(.75)	763 (73.15%)	3117 (75.13%)	3062 (79.37%)
63	no home	start(.90)	pow(.75)	747 (71.62%)	2965 (71.46%)	2987 (77.42%)
64	adj. ave.	start(.90)	pow(.90)	758 (72.67%)	3106 (74.86%)	3048 (79.00%)
65	ave.	start(.90)	pow(.90)	756 (72.48%)	3105 (74.84%)	3064 (79.42%)
66	no home	start(.90)	pow(.90)	741 (71.05%)	2950 (71.10%)	3002 (77.81%)
67	adj. ave.	start(.95)		759 (72.77%)	3097 (74.64%)	3040 (78.80%)
68	ave.	start(.95)		759 (72.77%)	3103 (74.79%)	3067 (79.50%)
69	no home	start(.95)		741 (71.05%)	2959 (71.32%)	3002 (77.81%)
70	adj. ave.	start(.95)	exp(.85)	756 (72.48%)	3060 (73.75%)	3023 (78.36%)
71	ave.	start(.95)	exp(.85)	755 (72.39%)	3072 (74.04%)	3033 (78.62%)
72	no home	start(.95)	exp(.85)	734 (70.37%)	2905 (70.02%)	2984 (77.35%)
73	adj. ave.	start(.95)	exp(.90)	760 (72.87%)	3075 (74.11%)	3040 (78.80%)
74	ave.	start(.95)	exp(.90)	761 (72.96%)	3094 (74.57%)	3058 (79.26%)

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	Enhancements			FB 1989 *Accuracy* *#Correct(%)*	MBK 1989-1990 *Accuracy* *#Correct(%)*	WBK 1989-1990 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	735 (70.47%)	2930 (70.62%)	2993 (77.58%)
76	adj. ave.	start(.95)	exp(.95)	757 (72.58%)	3093 (74.55%)	3055 (79.19%)
77	ave.	start(.95)	exp(.95)	761 (72.96%)	3102 (74.77%)	3067 (79.50%)
78	no home	start(.95)	exp(.95)	740 (70.95%)	2949 (71.08%)	3004 (77.86%)
79	adj. ave.	start(.95)	pow(.50)	758 (72.67%)	3110 (74.96%)	3044 (78.90%)
80	ave.	start(.95)	pow(.50)	754 (72.29%)	3121 (75.22%)	3058 (79.26%)
81	no home	start(.95)	pow(.50)	748 (71.72%)	2947 (71.03%)	2977 (77.16%)
82	adj. ave.	start(.95)	pow(.75)	759 (72.77%)	3118 (75.15%)	3046 (78.95%)
83	ave.	start(.95)	pow(.75)	762 (73.06%)	3115 (75.08%)	3063 (79.39%)
84	no home	start(.95)	pow(.75)	751 (72.00%)	2962 (71.39%)	2986 (77.40%)
85	adj. ave.	start(.95)	pow(.90)	756 (72.48%)	3099 (74.69%)	3046 (78.95%)
86	ave.	start(.95)	pow(.90)	757 (72.58%)	3099 (74.69%)	3067 (79.50%)
87	no home	start(.95)	pow(.90)	741 (71.05%)	2949 (71.08%)	3002 (77.81%)

Table 29: 1990-1991 Least Squares Results

	Enhancements			FB 1990 *Accuracy* *#Correct(%)*	MBK 1990-1991 *Accuracy* *#Correct(%)*	WBK 1990-1991 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		696 (66.54%)	3085 (73.05%)	2990 (75.83%)
2	ave.	no start		693 (66.25%)	3087 (73.10%)	2990 (75.83%)
3	no home	no start		651 (62.24%)	2884 (68.29%)	2881 (73.07%)
4	adj. ave.	no start	exp(.85)	696 (66.54%)	3077 (72.86%)	2970 (75.32%)
5	ave.	no start	exp(.85)	693 (66.25%)	3076 (72.84%)	2967 (75.25%)
6	no home	no start	exp(.85)	666 (63.67%)	2880 (68.20%)	2877 (72.96%)
7	adj. ave.	no start	exp(.90)	695 (66.44%)	3079 (72.91%)	2984 (75.68%)
8	ave.	no start	exp(.90)	699 (66.83%)	3076 (72.84%)	2973 (75.40%)
9	no home	no start	exp(.90)	660 (63.10%)	2875 (68.08%)	2875 (72.91%)
10	adj. ave.	no start	exp(.95)	696 (66.54%)	3083 (73.00%)	2991 (75.86%)
11	ave.	no start	exp(.95)	698 (66.73%)	3093 (73.24%)	2988 (75.78%)
12	no home	no start	exp(.95)	658 (62.91%)	2891 (68.46%)	2871 (72.81%)
13	adj. ave.	no start	ones	654 (62.52%)	3012 (71.32%)	2907 (73.73%)
14	ave.	no start	ones	652 (62.33%)	3004 (71.13%)	2912 (73.85%)
15	no home	no start	ones	645 (61.66%)	2791 (66.09%)	2750 (69.74%)
16	adj. ave.	no start	pow(.50)	689 (65.87%)	3091 (73.19%)	2980 (75.58%)
17	ave.	no start	pow(.50)	692 (66.16%)	3086 (73.08%)	2979 (75.55%)
18	no home	no start	pow(.50)	655 (62.62%)	2893 (68.51%)	2881 (73.07%)

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	Enhancements			FB 1990 *Accuracy* *#Correct(%)*	MBK 1990-1991 *Accuracy* *#Correct(%)*	WBK 1990-1991 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	692 (66.16%)	3097 (73.34%)	2995 (75.96%)
20	ave.	no start	pow(.75)	692 (66.16%)	3082 (72.98%)	2990 (75.83%)
21	no home	no start	pow(.75)	657 (62.81%)	2885 (68.32%)	2879 (73.02%)
22	adj. ave.	no start	pow(.90)	692 (66.16%)	3085 (73.05%)	2991 (75.86%)
23	ave.	no start	pow(.90)	692 (66.16%)	3087 (73.10%)	2990 (75.83%)
24	no home	no start	pow(.90)	648 (61.95%)	2879 (68.17%)	2881 (73.07%)
25	adj. ave.	start		758 (72.47%)	3141 (74.38%)	3104 (78.72%)
26	ave.	start		760 (72.66%)	3140 (74.35%)	3112 (78.92%)
27	no home	start		757 (72.37%)	3010 (71.28%)	3018 (76.54%)
28	adj. ave.	start	exp(.85)	748 (71.51%)	3106 (73.55%)	3047 (77.28%)
29	ave.	start	exp(.85)	755 (72.18%)	3108 (73.60%)	3074 (77.96%)
30	no home	start	exp(.85)	760 (72.66%)	2987 (70.73%)	2991 (75.86%)
31	adj. ave.	start	exp(.90)	753 (71.99%)	3131 (74.14%)	3081 (78.14%)
32	ave.	start	exp(.90)	762 (72.85%)	3122 (73.93%)	3098 (78.57%)
33	no home	start	exp(.90)	759 (72.56%)	2975 (70.45%)	2998 (76.03%)
34	adj. ave.	start	exp(.95)	755 (72.18%)	3142 (74.40%)	3092 (78.42%)
35	ave.	start	exp(.95)	757 (72.37%)	3133 (74.19%)	3112 (78.92%)
36	no home	start	exp(.95)	753 (71.99%)	2999 (71.02%)	3011 (76.36%)
37	adj. ave.	start	pow(.50)	748 (71.51%)	3137 (74.28%)	3108 (78.82%)

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	Enhancements			FB 1990 *Accuracy #Correct(%)*	MBK 1990-1991 *Accuracy #Correct(%)*	WBK 1990-1991 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	755 (72.18%)	3133 (74.19%)	3090 (78.37%)
39	no home	start	pow(.50)	752 (71.89%)	3014 (71.37%)	3013 (76.41%)
40	adj. ave.	start	pow(.75)	759 (72.56%)	3138 (74.31%)	3109 (78.85%)
41	ave.	start	pow(.75)	758 (72.47%)	3127 (74.05%)	3119 (79.10%)
42	no home	start	pow(.75)	754 (72.08%)	2994 (70.90%)	3026 (76.74%)
43	adj. ave.	start	pow(.90)	761 (72.75%)	3136 (74.26%)	3106 (78.77%)
44	ave.	start	pow(.90)	764 (73.04%)	3129 (74.09%)	3118 (79.08%)
45	no home	start	pow(.90)	761 (72.75%)	3016 (71.42%)	3017 (76.52%)
46	adj. ave.	start(.90)		758 (72.47%)	3141 (74.38%)	3104 (78.72%)
47	ave.	start(.90)		760 (72.66%)	3140 (74.35%)	3112 (78.92%)
48	no home	start(.90)		755 (72.18%)	3010 (71.28%)	3011 (76.36%)
49	adj. ave.	start(.90)	exp(.85)	753 (71.99%)	3108 (73.60%)	3053 (77.43%)
50	ave.	start(.90)	exp(.85)	755 (72.18%)	3113 (73.72%)	3072 (77.91%)
51	no home	start(.90)	exp(.85)	757 (72.37%)	2988 (70.76%)	2989 (75.81%)
52	adj. ave.	start(.90)	exp(.90)	758 (72.47%)	3127 (74.05%)	3076 (78.01%)
53	ave.	start(.90)	exp(.90)	754 (72.08%)	3117 (73.81%)	3089 (78.34%)
54	no home	start(.90)	exp(.90)	758 (72.47%)	2974 (70.42%)	2996 (75.98%)
55	adj. ave.	start(.90)	exp(.95)	753 (71.99%)	3143 (74.43%)	3093 (78.44%)
56	ave.	start(.90)	exp(.95)	751 (71.80%)	3129 (74.09%)	3106 (78.77%)

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	Enhancements			FB 1990	MBK 1990-1991	WBK 1990-1991
	Home	*Start*	*Other*	*Accuracy* *#Correct(%)*	*Accuracy* *#Correct(%)*	*Accuracy* *#Correct(%)*
57	no home	start(.90)	exp(.95)	752 (71.89%)	3001 (71.06%)	3008 (76.29%)
58	adj. ave.	start(.90)	pow(.50)	747 (71.41%)	3137 (74.28%)	3095 (78.49%)
59	ave.	start(.90)	pow(.50)	754 (72.08%)	3130 (74.12%)	3081 (78.14%)
60	no home	start(.90)	pow(.50)	754 (72.08%)	3004 (71.13%)	3007 (76.26%)
61	adj. ave.	start(.90)	pow(.75)	756 (72.28%)	3136 (74.26%)	3107 (78.80%)
62	ave.	start(.90)	pow(.75)	752 (71.89%)	3125 (74.00%)	3115 (79.00%)
63	no home	start(.90)	pow(.75)	751 (71.80%)	2992 (70.85%)	3020 (76.59%)
64	adj. ave.	start(.90)	pow(.90)	757 (72.37%)	3127 (74.05%)	3102 (78.67%)
65	ave.	start(.90)	pow(.90)	757 (72.37%)	3127 (74.05%)	3115 (79.00%)
66	no home	start(.90)	pow(.90)	754 (72.08%)	3012 (71.32%)	3020 (76.59%)
67	adj. ave.	start(.95)		758 (72.47%)	3141 (74.38%)	3104 (78.72%)
68	ave.	start(.95)		760 (72.66%)	3140 (74.35%)	3112 (78.92%)
69	no home	start(.95)		755 (72.18%)	3007 (71.21%)	3012 (76.39%)
70	adj. ave.	start(.95)	exp(.85)	753 (71.99%)	3107 (73.57%)	3047 (77.28%)
71	ave.	start(.95)	exp(.85)	753 (71.99%)	3111 (73.67%)	3073 (77.94%)
72	no home	start(.95)	exp(.85)	757 (72.37%)	2987 (70.73%)	2988 (75.78%)
73	adj. ave.	start(.95)	exp(.90)	755 (72.18%)	3129 (74.09%)	3081 (78.14%)
74	ave.	start(.95)	exp(.90)	760 (72.66%)	3120 (73.88%)	3092 (78.42%)

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	Enhancements			FB 1990 *Accuracy* *#Correct(%)*	MBK 1990-1991 *Accuracy* *#Correct(%)*	WBK 1990-1991 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	758 (72.47%)	2976 (70.47%)	2998 (76.03%)
76	adj. ave.	start(.95)	exp(.95)	753 (71.99%)	3141 (74.38%)	3094 (78.47%)
77	ave.	start(.95)	exp(.95)	756 (72.28%)	3127 (74.05%)	3109 (78.85%)
78	no home	start(.95)	exp(.95)	753 (71.99%)	3003 (71.11%)	3009 (76.31%)
79	adj. ave.	start(.95)	pow(.50)	746 (71.32%)	3136 (74.26%)	3102 (78.67%)
80	ave.	start(.95)	pow(.50)	751 (71.80%)	3133 (74.19%)	3088 (78.32%)
81	no home	start(.95)	pow(.50)	751 (71.80%)	3008 (71.23%)	3006 (76.24%)
82	adj. ave.	start(.95)	pow(.75)	754 (72.08%)	3138 (74.31%)	3106 (78.77%)
83	ave.	start(.95)	pow(.75)	755 (72.18%)	3126 (74.02%)	3114 (78.98%)
84	no home	start(.95)	pow(.75)	754 (72.08%)	2993 (70.87%)	3022 (76.64%)
85	adj. ave.	start(.95)	pow(.90)	762 (72.85%)	3131 (74.14%)	3106 (78.77%)
86	ave.	start(.95)	pow(.90)	760 (72.66%)	3129 (74.09%)	3116 (79.03%)
87	no home	start(.95)	pow(.90)	760 (72.66%)	3015 (71.39%)	3018 (76.54%)

Table 30: 1991-1992 Least Squares Results

	Enhancements			FB 1991 *Accuracy* *#Correct(%)*	MBK 1991-1992 *Accuracy* *#Correct(%)*	WBK 1991-1992 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		717 (67.83%)	3136 (74.19%)	3117 (77.38%)
2	ave.	no start		717 (67.83%)	3112 (73.62%)	3119 (77.43%)
3	no home	no start		697 (65.94%)	2957 (69.96%)	2971 (73.76%)
4	adj. ave.	no start	exp(.85)	723 (68.40%)	3112 (73.62%)	3083 (76.54%)
5	ave.	no start	exp(.85)	722 (68.31%)	3104 (73.43%)	3086 (76.61%)
6	no home	no start	exp(.85)	700 (66.23%)	2947 (69.72%)	2952 (73.29%)
7	adj. ave.	no start	exp(.90)	719 (68.02%)	3119 (73.79%)	3102 (77.01%)
8	ave.	no start	exp(.90)	720 (68.12%)	3112 (73.62%)	3104 (77.06%)
9	no home	no start	exp(.90)	696 (65.85%)	2952 (69.84%)	2974 (73.83%)
10	adj. ave.	no start	exp(.95)	716 (67.74%)	3131 (74.07%)	3114 (77.31%)
11	ave.	no start	exp(.95)	720 (68.12%)	3099 (73.31%)	3110 (77.21%)
12	no home	no start	exp(.95)	695 (65.75%)	2965 (70.14%)	2980 (73.98%)
13	adj. ave.	no start	ones	714 (67.55%)	3037 (71.85%)	2992 (74.28%)
14	ave.	no start	ones	717 (67.83%)	3037 (71.85%)	2997 (74.40%)
15	no home	no start	ones	677 (64.05%)	2844 (67.28%)	2857 (70.93%)
16	adj. ave.	no start	pow(.50)	716 (67.74%)	3119 (73.79%)	3085 (76.59%)
17	ave.	no start	pow(.50)	718 (67.93%)	3114 (73.67%)	3091 (76.74%)
18	no home	no start	pow(.50)	684 (64.71%)	2941 (69.58%)	2965 (73.61%)

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	Enhancements			FB 1991 *Accuracy #Correct(%)*	MBK 1991-1992 *Accuracy #Correct(%)*	WBK 1991-1992 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	721 (68.21%)	3132 (74.10%)	3103 (77.04%)
20	ave.	no start	pow(.75)	720 (68.12%)	3118 (73.76%)	3102 (77.01%)
21	no home	no start	pow(.75)	693 (65.56%)	2957 (69.96%)	2975 (73.86%)
22	adj. ave.	no start	pow(.90)	719 (68.02%)	3127 (73.98%)	3108 (77.16%)
23	ave.	no start	pow(.90)	718 (67.93%)	3109 (73.55%)	3111 (77.23%)
24	no home	no start	pow(.90)	695 (65.75%)	2957 (69.96%)	2971 (73.76%)
25	adj. ave.	start		772 (73.04%)	3173 (75.07%)	3176 (78.85%)
26	ave.	start		765 (72.37%)	3170 (74.99%)	3174 (78.80%)
27	no home	start		762 (72.09%)	3076 (72.77%)	3096 (76.86%)
28	adj. ave.	start	exp(.85)	768 (72.66%)	3159 (74.73%)	3148 (78.15%)
29	ave.	start	exp(.85)	765 (72.37%)	3164 (74.85%)	3151 (78.23%)
30	no home	start	exp(.85)	771 (72.94%)	3047 (72.08%)	3055 (75.84%)
31	adj. ave.	start	exp(.90)	774 (73.23%)	3168 (74.95%)	3171 (78.72%)
32	ave.	start	exp(.90)	767 (72.56%)	3167 (74.92%)	3171 (78.72%)
33	no home	start	exp(.90)	770 (72.85%)	3063 (72.46%)	3099 (76.94%)
34	adj. ave.	start	exp(.95)	775 (73.32%)	3179 (75.21%)	3188 (79.15%)
35	ave.	start	exp(.95)	767 (72.56%)	3168 (74.95%)	3183 (79.02%)
36	no home	start	exp(.95)	767 (72.56%)	3074 (72.72%)	3104 (77.06%)
37	adj. ave.	start	pow(.50)	773 (73.13%)	3176 (75.14%)	3154 (78.30%)

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	Enhancements			FB 1991 *Accuracy #Correct(%)*	MBK 1991-1992 *Accuracy #Correct(%)*	WBK 1991-1992 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	771 (72.94%)	3172 (75.04%)	3171 (78.72%)
39	no home	start	pow(.50)	755 (71.43%)	3081 (72.89%)	3081 (76.49%)
40	adj. ave.	start	pow(.75)	774 (73.23%)	3174 (75.09%)	3178 (78.90%)
41	ave.	start	pow(.75)	758 (71.71%)	3174 (75.09%)	3173 (78.77%)
42	no home	start	pow(.75)	765 (72.37%)	3082 (72.91%)	3089 (76.69%)
43	adj. ave.	start	pow(.90)	770 (72.85%)	3185 (75.35%)	3190 (79.20%)
44	ave.	start	pow(.90)	764 (72.28%)	3171 (75.02%)	3180 (78.95%)
45	no home	start	pow(.90)	764 (72.28%)	3075 (72.75%)	3096 (76.86%)
46	adj. ave.	start(.90)		772 (73.04%)	3173 (75.07%)	3176 (78.85%)
47	ave.	start(.90)		765 (72.37%)	3170 (74.99%)	3174 (78.80%)
48	no home	start(.90)		769 (72.75%)	3073 (72.70%)	3098 (76.91%)
49	adj. ave.	start(.90)	exp(.85)	766 (72.47%)	3160 (74.76%)	3148 (78.15%)
50	ave.	start(.90)	exp(.85)	762 (72.09%)	3157 (74.69%)	3148 (78.15%)
51	no home	start(.90)	exp(.85)	770 (72.85%)	3046 (72.06%)	3050 (75.72%)
52	adj. ave.	start(.90)	exp(.90)	772 (73.04%)	3166 (74.90%)	3170 (78.70%)
53	ave.	start(.90)	exp(.90)	761 (72.00%)	3163 (74.83%)	3171 (78.72%)
54	no home	start(.90)	exp(.90)	770 (72.85%)	3060 (72.39%)	3094 (76.81%)
55	adj. ave.	start(.90)	exp(.95)	776 (73.42%)	3185 (75.35%)	3190 (79.20%)
56	ave.	start(.90)	exp(.95)	765 (72.37%)	3166 (74.90%)	3179 (78.92%)

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	Enhancements			FB 1991 *Accuracy* *#Correct(%)*	MBK 1991-1992 *Accuracy* *#Correct(%)*	WBK 1991-1992 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	772 (73.04%)	3072 (72.68%)	3104 (77.06%)
58	adj. ave.	start(.90)	pow(.50)	773 (73.13%)	3176 (75.14%)	3157 (78.38%)
59	ave.	start(.90)	pow(.50)	765 (72.37%)	3165 (74.88%)	3177 (78.87%)
60	no home	start(.90)	pow(.50)	755 (71.43%)	3075 (72.75%)	3073 (76.29%)
61	adj. ave.	start(.90)	pow(.75)	768 (72.66%)	3176 (75.14%)	3185 (79.07%)
62	ave.	start(.90)	pow(.75)	758 (71.71%)	3168 (74.95%)	3180 (78.95%)
63	no home	start(.90)	pow(.75)	764 (72.28%)	3084 (72.96%)	3089 (76.69%)
64	adj. ave.	start(.90)	pow(.90)	770 (72.85%)	3189 (75.44%)	3185 (79.07%)
65	ave.	start(.90)	pow(.90)	763 (72.19%)	3170 (74.99%)	3174 (78.80%)
66	no home	start(.90)	pow(.90)	764 (72.28%)	3084 (72.96%)	3102 (77.01%)
67	adj. ave.	start(.95)		772 (73.04%)	3173 (75.07%)	3176 (78.85%)
68	ave.	start(.95)		765 (72.37%)	3170 (74.99%)	3174 (78.80%)
69	no home	start(.95)		768 (72.66%)	3072 (72.68%)	3096 (76.86%)
70	adj. ave.	start(.95)	exp(.85)	766 (72.47%)	3156 (74.66%)	3150 (78.20%)
71	ave.	start(.95)	exp(.85)	764 (72.28%)	3159 (74.73%)	3149 (78.18%)
72	no home	start(.95)	exp(.85)	774 (73.23%)	3044 (72.01%)	3053 (75.79%)
73	adj. ave.	start(.95)	exp(.90)	775 (73.32%)	3170 (74.99%)	3169 (78.67%)
74	ave.	start(.95)	exp(.90)	765 (72.37%)	3163 (74.83%)	3171 (78.72%)

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	Enhancements			FB 1991 *Accuracy #Correct(%)*	MBK 1991-1992 *Accuracy #Correct(%)*	WBK 1991-1992 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	770 (72.85%)	3059 (72.37%)	3098 (76.91%)
76	adj. ave.	start(.95)	exp(.95)	777 (73.51%)	3184 (75.33%)	3189 (79.17%)
77	ave.	start(.95)	exp(.95)	770 (72.85%)	3168 (74.95%)	3180 (78.95%)
78	no home	start(.95)	exp(.95)	771 (72.94%)	3074 (72.72%)	3102 (77.01%)
79	adj. ave.	start(.95)	pow(.50)	773 (73.13%)	3177 (75.16%)	3156 (78.35%)
80	ave.	start(.95)	pow(.50)	769 (72.75%)	3168 (74.95%)	3170 (78.70%)
81	no home	start(.95)	pow(.50)	754 (71.33%)	3078 (72.82%)	3076 (76.37%)
82	adj. ave.	start(.95)	pow(.75)	771 (72.94%)	3176 (75.14%)	3180 (78.95%)
83	ave.	start(.95)	pow(.75)	760 (71.90%)	3171 (75.02%)	3175 (78.82%)
84	no home	start(.95)	pow(.75)	764 (72.28%)	3082 (72.91%)	3089 (76.69%)
85	adj. ave.	start(.95)	pow(.90)	770 (72.85%)	3188 (75.42%)	3193 (79.27%)
86	ave.	start(.95)	pow(.90)	763 (72.19%)	3171 (75.02%)	3178 (78.90%)
87	no home	start(.95)	pow(.90)	764 (72.28%)	3081 (72.89%)	3099 (76.94%)

Table 31: 1992-1993 Least Squares Results

	Enhancements			FB 1992 *Accuracy #Correct(%)*	MBK 1992-1993 *Accuracy #Correct(%)*	WBK 1992-1993 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		705 (67.21%)	3021 (74.03%)	2934 (74.50%)
2	ave.	no start		705 (67.21%)	2992 (73.32%)	2938 (74.61%)
3	no home	no start		637 (60.72%)	2809 (68.83%)	2883 (73.21%)
4	adj. ave.	no start	exp(.85)	703 (67.02%)	3015 (73.88%)	2942 (74.71%)
5	ave.	no start	exp(.85)	693 (66.06%)	2999 (73.49%)	2943 (74.73%)
6	no home	no start	exp(.85)	644 (61.39%)	2778 (68.07%)	2859 (72.60%)
7	adj. ave.	no start	exp(.90)	705 (67.21%)	3013 (73.83%)	2946 (74.81%)
8	ave.	no start	exp(.90)	703 (67.02%)	3011 (73.78%)	2945 (74.78%)
9	no home	no start	exp(.90)	639 (60.92%)	2793 (68.44%)	2864 (72.73%)
10	adj. ave.	no start	exp(.95)	711 (67.78%)	3017 (73.93%)	2936 (74.56%)
11	ave.	no start	exp(.95)	706 (67.30%)	3002 (73.56%)	2947 (74.83%)
12	no home	no start	exp(.95)	637 (60.72%)	2802 (68.66%)	2882 (73.18%)
13	adj. ave.	no start	ones	673 (64.16%)	2949 (72.26%)	2872 (72.93%)
14	ave.	no start	ones	675 (64.35%)	2939 (72.02%)	2877 (73.06%)
15	no home	no start	ones	616 (58.72%)	2693 (65.99%)	2762 (70.14%)
16	adj. ave.	no start	pow(.50)	711 (67.78%)	3016 (73.90%)	2942 (74.71%)
17	ave.	no start	pow(.50)	713 (67.97%)	3002 (73.56%)	2935 (74.53%)
18	no home	no start	pow(.50)	642 (61.20%)	2791 (68.39%)	2833 (71.94%)

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	Enhancements			FB 1992 *Accuracy #Correct(%)*	MBK 1992-1993 *Accuracy #Correct(%)*	WBK 1992-1993 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	708 (67.49%)	3020 (74.00%)	2942 (74.71%)
20	ave.	no start	pow(.75)	713 (67.97%)	2998 (73.46%)	2944 (74.76%)
21	no home	no start	pow(.75)	636 (60.63%)	2813 (68.93%)	2870 (72.88%)
22	adj. ave.	no start	pow(.90)	705 (67.21%)	3017 (73.93%)	2935 (74.53%)
23	ave.	no start	pow(.90)	705 (67.21%)	2995 (73.39%)	2941 (74.68%)
24	no home	no start	pow(.90)	632 (60.25%)	2809 (68.83%)	2885 (73.26%)
25	adj. ave.	start		757 (72.16%)	3051 (74.76%)	3065 (77.83%)
26	ave.	start		761 (72.55%)	3037 (74.42%)	3073 (78.03%)
27	no home	start		730 (69.59%)	2919 (71.53%)	3017 (76.61%)
28	adj. ave.	start	exp(.85)	751 (71.59%)	3024 (74.10%)	3040 (77.20%)
29	ave.	start	exp(.85)	758 (72.26%)	3033 (74.32%)	3058 (77.65%)
30	no home	start	exp(.85)	735 (70.07%)	2890 (70.82%)	2971 (75.44%)
31	adj. ave.	start	exp(.90)	760 (72.45%)	3047 (74.66%)	3060 (77.70%)
32	ave.	start	exp(.90)	767 (73.12%)	3043 (74.57%)	3070 (77.96%)
33	no home	start	exp(.90)	735 (70.07%)	2913 (71.38%)	2991 (75.95%)
34	adj. ave.	start	exp(.95)	762 (72.64%)	3053 (74.81%)	3055 (77.58%)
35	ave.	start	exp(.95)	763 (72.74%)	3040 (74.49%)	3084 (78.31%)
36	no home	start	exp(.95)	733 (69.88%)	2921 (71.58%)	3012 (76.49%)
37	adj. ave.	start	pow(.50)	758 (72.26%)	3050 (74.74%)	3058 (77.65%)

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	Enhancements			FB 1992 *Accuracy* *#Correct(%)*	MBK 1992-1993 *Accuracy* *#Correct(%)*	WBK 1992-1993 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	767 (73.12%)	3062 (75.03%)	3060 (77.70%)
39	no home	start	pow(.50)	727 (69.30%)	2933 (71.87%)	2990 (75.93%)
40	adj. ave.	start	pow(.75)	759 (72.35%)	3050 (74.74%)	3067 (77.88%)
41	ave.	start	pow(.75)	773 (73.69%)	3052 (74.79%)	3065 (77.83%)
42	no home	start	pow(.75)	736 (70.16%)	2925 (71.67%)	3007 (76.36%)
43	adj. ave.	start	pow(.90)	759 (72.35%)	3052 (74.79%)	3067 (77.88%)
44	ave.	start	pow(.90)	767 (73.12%)	3043 (74.57%)	3071 (77.98%)
45	no home	start	pow(.90)	729 (69.49%)	2932 (71.85%)	3009 (76.41%)
46	adj. ave.	start(.90)		757 (72.16%)	3051 (74.76%)	3065 (77.83%)
47	ave.	start(.90)		761 (72.55%)	3037 (74.42%)	3073 (78.03%)
48	no home	start(.90)		729 (69.49%)	2920 (71.55%)	3010 (76.43%)
49	adj. ave.	start(.90)	exp(.85)	754 (71.88%)	3033 (74.32%)	3046 (77.35%)
50	ave.	start(.90)	exp(.85)	754 (71.88%)	3034 (74.34%)	3051 (77.48%)
51	no home	start(.90)	exp(.85)	731 (69.69%)	2890 (70.82%)	2968 (75.37%)
52	adj. ave.	start(.90)	exp(.90)	758 (72.26%)	3050 (74.74%)	3063 (77.78%)
53	ave.	start(.90)	exp(.90)	761 (72.55%)	3044 (74.59%)	3067 (77.88%)
54	no home	start(.90)	exp(.90)	733 (69.88%)	2910 (71.31%)	2986 (75.83%)
55	adj. ave.	start(.90)	exp(.95)	763 (72.74%)	3059 (74.96%)	3056 (77.60%)
56	ave.	start(.90)	exp(.95)	762 (72.64%)	3045 (74.61%)	3081 (78.24%)

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	Enhancements			FB 1992 *Accuracy #Correct(%)*	MBK 1992-1993 *Accuracy #Correct(%)*	WBK 1992-1993 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	732 (69.78%)	2917 (71.48%)	3011 (76.46%)
58	adj. ave.	start(.90)	pow(.50)	760 (72.45%)	3046 (74.64%)	3066 (77.86%)
59	ave.	start(.90)	pow(.50)	764 (72.83%)	3055 (74.86%)	3059 (77.68%)
60	no home	start(.90)	pow(.50)	728 (69.40%)	2928 (71.75%)	2988 (75.88%)
61	adj. ave.	start(.90)	pow(.75)	761 (72.55%)	3054 (74.83%)	3065 (77.83%)
62	ave.	start(.90)	pow(.75)	772 (73.59%)	3050 (74.74%)	3066 (77.86%)
63	no home	start(.90)	pow(.75)	732 (69.78%)	2926 (71.70%)	3001 (76.21%)
64	adj. ave.	start(.90)	pow(.90)	754 (71.88%)	3061 (75.01%)	3067 (77.88%)
65	ave.	start(.90)	pow(.90)	766 (73.02%)	3040 (74.49%)	3076 (78.11%)
66	no home	start(.90)	pow(.90)	729 (69.49%)	2932 (71.85%)	3013 (76.51%)
67	adj. ave.	start(.95)		757 (72.16%)	3051 (74.76%)	3065 (77.83%)
68	ave.	start(.95)		761 (72.55%)	3037 (74.42%)	3073 (78.03%)
69	no home	start(.95)		728 (69.40%)	2919 (71.53%)	3014 (76.54%)
70	adj. ave.	start(.95)	exp(.85)	754 (71.88%)	3028 (74.20%)	3044 (77.30%)
71	ave.	start(.95)	exp(.85)	758 (72.26%)	3036 (74.39%)	3056 (77.60%)
72	no home	start(.95)	exp(.85)	733 (69.88%)	2892 (70.86%)	2971 (75.44%)
73	adj. ave.	start(.95)	exp(.90)	758 (72.26%)	3051 (74.76%)	3062 (77.76%)
74	ave.	start(.95)	exp(.90)	761 (72.55%)	3043 (74.57%)	3068 (77.91%)

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	Enhancements			FB 1992 *Accuracy* *#Correct(%)*	MBK 1992-1993 *Accuracy* *#Correct(%)*	WBK 1992-1993 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	733 (69.88%)	2911 (71.33%)	2988 (75.88%)
76	adj. ave.	start(.95)	exp(.95)	762 (72.64%)	3059 (74.96%)	3059 (77.68%)
77	ave.	start(.95)	exp(.95)	760 (72.45%)	3043 (74.57%)	3082 (78.26%)
78	no home	start(.95)	exp(.95)	731 (69.69%)	2920 (71.55%)	3012 (76.49%)
79	adj. ave.	start(.95)	pow(.50)	762 (72.64%)	3048 (74.69%)	3063 (77.78%)
80	ave.	start(.95)	pow(.50)	766 (73.02%)	3057 (74.91%)	3060 (77.70%)
81	no home	start(.95)	pow(.50)	727 (69.30%)	2928 (71.75%)	2985 (75.80%)
82	adj. ave.	start(.95)	pow(.75)	759 (72.35%)	3054 (74.83%)	3066 (77.86%)
83	ave.	start(.95)	pow(.75)	771 (73.50%)	3049 (74.71%)	3066 (77.86%)
84	no home	start(.95)	pow(.75)	735 (70.07%)	2926 (71.70%)	3006 (76.33%)
85	adj. ave.	start(.95)	pow(.90)	758 (72.26%)	3056 (74.88%)	3063 (77.78%)
86	ave.	start(.95)	pow(.90)	766 (73.02%)	3042 (74.54%)	3071 (77.98%)
87	no home	start(.95)	pow(.90)	728 (69.40%)	2932 (71.85%)	3009 (76.41%)

Table 32: 1993-1994 Least Squares Results

	Enhancements			FB 1993 *Accuracy* *#Correct(%)*	MBK 1993-1994 *Accuracy* *#Correct(%)*	WBK 1993-1994 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		780 (67.18%)	3068 (73.61%)	3136 (77.99%)
2	ave.	no start		784 (67.53%)	3055 (73.30%)	3122 (77.64%)
3	no home	no start		723 (62.27%)	2837 (68.07%)	3009 (74.83%)
4	adj. ave.	no start	exp(.85)	781 (67.27%)	3065 (73.54%)	3112 (77.39%)
5	ave.	no start	exp(.85)	784 (67.53%)	3060 (73.42%)	3098 (77.05%)
6	no home	no start	exp(.85)	727 (62.62%)	2836 (68.04%)	2990 (74.36%)
7	adj. ave.	no start	exp(.90)	783 (67.44%)	3069 (73.63%)	3116 (77.49%)
8	ave.	no start	exp(.90)	785 (67.61%)	3067 (73.58%)	3108 (77.29%)
9	no home	no start	exp(.90)	721 (62.10%)	2844 (68.23%)	2997 (74.53%)
10	adj. ave.	no start	exp(.95)	778 (67.01%)	3066 (73.56%)	3130 (77.84%)
11	ave.	no start	exp(.95)	782 (67.36%)	3059 (73.39%)	3121 (77.62%)
12	no home	no start	exp(.95)	720 (62.02%)	2843 (68.21%)	3000 (74.61%)
13	adj. ave.	no start	ones	770 (66.32%)	2999 (71.95%)	3024 (75.21%)
14	ave.	no start	ones	775 (66.75%)	3009 (72.19%)	3026 (75.25%)
15	no home	no start	ones	689 (59.35%)	2771 (66.48%)	2879 (71.60%)
16	adj. ave.	no start	pow(.50)	777 (66.93%)	3068 (73.61%)	3109 (77.32%)
17	ave.	no start	pow(.50)	775 (66.75%)	3068 (73.61%)	3106 (77.24%)
18	no home	no start	pow(.50)	720 (62.02%)	2819 (67.63%)	2970 (73.86%)

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	Enhancements			FB 1993 *Accuracy* *#Correct(%)*	MBK 1993-1994 *Accuracy* *#Correct(%)*	WBK 1993-1994 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	778 (67.01%)	3069 (73.63%)	3118 (77.54%)
20	ave.	no start	pow(.75)	780 (67.18%)	3081 (73.92%)	3123 (77.67%)
21	no home	no start	pow(.75)	726 (62.53%)	2829 (67.87%)	2980 (74.11%)
22	adj. ave.	no start	pow(.90)	778 (67.01%)	3078 (73.85%)	3128 (77.79%)
23	ave.	no start	pow(.90)	780 (67.18%)	3070 (73.66%)	3124 (77.69%)
24	no home	no start	pow(.90)	719 (61.93%)	2832 (67.95%)	3001 (74.63%)
25	adj. ave.	start		841 (72.44%)	3088 (74.09%)	3206 (79.73%)
26	ave.	start		833 (71.75%)	3117 (74.78%)	3206 (79.73%)
27	no home	start		824 (70.97%)	2965 (71.14%)	3139 (78.07%)
28	adj. ave.	start	exp(.85)	841 (72.44%)	3078 (73.85%)	3183 (79.16%)
29	ave.	start	exp(.85)	827 (71.23%)	3105 (74.50%)	3168 (78.79%)
30	no home	start	exp(.85)	822 (70.80%)	2937 (70.47%)	3095 (76.97%)
31	adj. ave.	start	exp(.90)	839 (72.27%)	3095 (74.26%)	3197 (79.51%)
32	ave.	start	exp(.90)	827 (71.23%)	3121 (74.88%)	3180 (79.08%)
33	no home	start	exp(.90)	822 (70.80%)	2943 (70.61%)	3122 (77.64%)
34	adj. ave.	start	exp(.95)	844 (72.70%)	3094 (74.23%)	3215 (79.96%)
35	ave.	start	exp(.95)	828 (71.32%)	3115 (74.74%)	3196 (79.48%)
36	no home	start	exp(.95)	825 (71.06%)	2963 (71.09%)	3125 (77.72%)
37	adj. ave.	start	pow(.50)	837 (72.09%)	3085 (74.02%)	3188 (79.28%)

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	Enhancements			FB 1993 *Accuracy* *#Correct(%)*	MBK 1993-1994 *Accuracy* *#Correct(%)*	WBK 1993-1994 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	831 (71.58%)	3130 (75.10%)	3192 (79.38%)
39	no home	start	pow(.50)	819 (70.54%)	2940 (70.54%)	3115 (77.47%)
40	adj. ave.	start	pow(.75)	836 (72.01%)	3091 (74.16%)	3213 (79.91%)
41	ave.	start	pow(.75)	827 (71.23%)	3126 (75.00%)	3208 (79.78%)
42	no home	start	pow(.75)	829 (71.40%)	2948 (70.73%)	3134 (77.94%)
43	adj. ave.	start	pow(.90)	838 (72.18%)	3086 (74.04%)	3212 (79.88%)
44	ave.	start	pow(.90)	833 (71.75%)	3114 (74.71%)	3211 (79.86%)
45	no home	start	pow(.90)	828 (71.32%)	2959 (70.99%)	3136 (77.99%)
46	adj. ave.	start(.90)		841 (72.44%)	3088 (74.09%)	3206 (79.73%)
47	ave.	start(.90)		833 (71.75%)	3117 (74.78%)	3206 (79.73%)
48	no home	start(.90)		824 (70.97%)	2958 (70.97%)	3141 (78.11%)
49	adj. ave.	start(.90)	exp(.85)	839 (72.27%)	3086 (74.04%)	3183 (79.16%)
50	ave.	start(.90)	exp(.85)	827 (71.23%)	3103 (74.45%)	3166 (78.74%)
51	no home	start(.90)	exp(.85)	823 (70.89%)	2935 (70.42%)	3095 (76.97%)
52	adj. ave.	start(.90)	exp(.90)	837 (72.09%)	3099 (74.35%)	3198 (79.53%)
53	ave.	start(.90)	exp(.90)	824 (70.97%)	3118 (74.81%)	3174 (78.94%)
54	no home	start(.90)	exp(.90)	822 (70.80%)	2944 (70.63%)	3116 (77.49%)
55	adj. ave.	start(.90)	exp(.95)	844 (72.70%)	3096 (74.28%)	3213 (79.91%)
56	ave.	start(.90)	exp(.95)	826 (71.15%)	3112 (74.66%)	3193 (79.41%)

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	Enhancements			FB 1993 *Accuracy* *#Correct(%)*	MBK 1993-1994 *Accuracy* *#Correct(%)*	WBK 1993-1994 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	822 (70.80%)	2959 (70.99%)	3125 (77.72%)
58	adj. ave.	start(.90)	pow(.50)	842 (72.52%)	3094 (74.23%)	3186 (79.23%)
59	ave.	start(.90)	pow(.50)	830 (71.49%)	3128 (75.05%)	3183 (79.16%)
60	no home	start(.90)	pow(.50)	820 (70.63%)	2938 (70.49%)	3109 (77.32%)
61	adj. ave.	start(.90)	pow(.75)	836 (72.01%)	3098 (74.33%)	3210 (79.83%)
62	ave.	start(.90)	pow(.75)	827 (71.23%)	3126 (75.00%)	3205 (79.71%)
63	no home	start(.90)	pow(.75)	829 (71.40%)	2943 (70.61%)	3126 (77.74%)
64	adj. ave.	start(.90)	pow(.90)	840 (72.35%)	3092 (74.18%)	3211 (79.86%)
65	ave.	start(.90)	pow(.90)	831 (71.58%)	3109 (74.59%)	3204 (79.68%)
66	no home	start(.90)	pow(.90)	827 (71.23%)	2961 (71.04%)	3134 (77.94%)
67	adj. ave.	start(.95)		841 (72.44%)	3088 (74.09%)	3206 (79.73%)
68	ave.	start(.95)		833 (71.75%)	3117 (74.78%)	3206 (79.73%)
69	no home	start(.95)		823 (70.89%)	2966 (71.16%)	3141 (78.11%)
70	adj. ave.	start(.95)	exp(.85)	843 (72.61%)	3080 (73.90%)	3183 (79.16%)
71	ave.	start(.95)	exp(.85)	828 (71.32%)	3106 (74.52%)	3169 (78.81%)
72	no home	start(.95)	exp(.85)	824 (70.97%)	2937 (70.47%)	3098 (77.05%)
73	adj. ave.	start(.95)	exp(.90)	839 (72.27%)	3097 (74.30%)	3199 (79.56%)
74	ave.	start(.95)	exp(.90)	824 (70.97%)	3117 (74.78%)	3180 (79.08%)

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	Enhancements			FB 1993 *Accuracy* *#Correct(%)*	MBK 1993-1994 *Accuracy* *#Correct(%)*	WBK 1993-1994 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	818 (70.46%)	2944 (70.63%)	3121 (77.62%)
76	adj. ave.	start(.95)	exp(.95)	843 (72.61%)	3097 (74.30%)	3216 (79.98%)
77	ave.	start(.95)	exp(.95)	830 (71.49%)	3112 (74.66%)	3196 (79.48%)
78	no home	start(.95)	exp(.95)	823 (70.89%)	2960 (71.02%)	3124 (77.69%)
79	adj. ave.	start(.95)	pow(.50)	841 (72.44%)	3091 (74.16%)	3188 (79.28%)
80	ave.	start(.95)	pow(.50)	831 (71.58%)	3130 (75.10%)	3186 (79.23%)
81	no home	start(.95)	pow(.50)	819 (70.54%)	2937 (70.47%)	3112 (77.39%)
82	adj. ave.	start(.95)	pow(.75)	840 (72.35%)	3094 (74.23%)	3212 (79.88%)
83	ave.	start(.95)	pow(.75)	830 (71.49%)	3125 (74.98%)	3209 (79.81%)
84	no home	start(.95)	pow(.75)	828 (71.32%)	2944 (70.63%)	3129 (77.82%)
85	adj. ave.	start(.95)	pow(.90)	837 (72.09%)	3090 (74.14%)	3217 (80.00%)
86	ave.	start(.95)	pow(.90)	831 (71.58%)	3111 (74.64%)	3211 (79.86%)
87	no home	start(.95)	pow(.90)	826 (71.15%)	2965 (71.14%)	3138 (78.04%)

Table 33: 1994-1995 Least Squares Results

	Enhancements			FB 1994 *Accuracy* *#Correct(%)*	MBK 1994-1995 *Accuracy* *#Correct(%)*	WBK 1994-1995 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		768 (65.87%)	3069 (73.47%)	3119 (76.43%)
2	ave.	no start		769 (65.95%)	3044 (72.88%)	3112 (76.26%)
3	no home	no start		713 (61.15%)	2877 (68.88%)	2999 (73.49%)
4	adj. ave.	no start	exp(.85)	771 (66.12%)	3071 (73.52%)	3092 (75.77%)
5	ave.	no start	exp(.85)	770 (66.04%)	3041 (72.80%)	3094 (75.81%)
6	no home	no start	exp(.85)	725 (62.18%)	2857 (68.40%)	2992 (73.32%)
7	adj. ave.	no start	exp(.90)	772 (66.21%)	3074 (73.59%)	3094 (75.81%)
8	ave.	no start	exp(.90)	768 (65.87%)	3048 (72.97%)	3099 (75.94%)
9	no home	no start	exp(.90)	721 (61.84%)	2868 (68.66%)	2988 (73.22%)
10	adj. ave.	no start	exp(.95)	768 (65.87%)	3078 (73.69%)	3118 (76.40%)
11	ave.	no start	exp(.95)	767 (65.78%)	3067 (73.43%)	3104 (76.06%)
12	no home	no start	exp(.95)	715 (61.32%)	2879 (68.93%)	3004 (73.61%)
13	adj. ave.	no start	ones	744 (63.81%)	2975 (71.22%)	3038 (74.44%)
14	ave.	no start	ones	743 (63.72%)	2970 (71.10%)	3040 (74.49%)
15	no home	no start	ones	691 (59.26%)	2750 (65.84%)	2902 (71.11%)
16	adj. ave.	no start	pow(.50)	772 (66.21%)	3037 (72.71%)	3128 (76.65%)
17	ave.	no start	pow(.50)	775 (66.47%)	3026 (72.44%)	3124 (76.55%)
18	no home	no start	pow(.50)	719 (61.66%)	2844 (68.09%)	3001 (73.54%)

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	Enhancements			FB 1994 *Accuracy #Correct(%)*	MBK 1994-1995 *Accuracy #Correct(%)*	WBK 1994-1995 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	775 (66.47%)	3051 (73.04%)	3141 (76.97%)
20	ave.	no start	pow(.75)	776 (66.55%)	3045 (72.90%)	3121 (76.48%)
21	no home	no start	pow(.75)	718 (61.58%)	2874 (68.81%)	3012 (73.81%)
22	adj. ave.	no start	pow(.90)	771 (66.12%)	3066 (73.40%)	3129 (76.67%)
23	ave.	no start	pow(.90)	774 (66.38%)	3053 (73.09%)	3114 (76.30%)
24	no home	no start	pow(.90)	716 (61.41%)	2879 (68.93%)	3006 (73.66%)
25	adj. ave.	start		824 (70.67%)	3108 (74.41%)	3214 (78.76%)
26	ave.	start		840 (72.04%)	3091 (74.00%)	3210 (78.66%)
27	no home	start		827 (70.93%)	3004 (71.92%)	3153 (77.26%)
28	adj. ave.	start	exp(.85)	824 (70.67%)	3102 (74.26%)	3165 (77.55%)
29	ave.	start	exp(.85)	823 (70.58%)	3076 (73.64%)	3168 (77.63%)
30	no home	start	exp(.85)	824 (70.67%)	2965 (70.98%)	3118 (76.40%)
31	adj. ave.	start	exp(.90)	829 (71.10%)	3114 (74.55%)	3179 (77.90%)
32	ave.	start	exp(.90)	834 (71.53%)	3087 (73.90%)	3177 (77.85%)
33	no home	start	exp(.90)	824 (70.67%)	2972 (71.15%)	3142 (76.99%)
34	adj. ave.	start	exp(.95)	823 (70.58%)	3117 (74.62%)	3197 (78.34%)
35	ave.	start	exp(.95)	840 (72.04%)	3096 (74.12%)	3193 (78.24%)
36	no home	start	exp(.95)	826 (70.84%)	3004 (71.92%)	3141 (76.97%)
37	adj. ave.	start	pow(.50)	825 (70.75%)	3079 (73.71%)	3221 (78.93%)

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	Enhancements			FB 1994 *Accuracy #Correct(%)*	MBK 1994-1995 *Accuracy #Correct(%)*	WBK 1994-1995 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	834 (71.53%)	3077 (73.67%)	3225 (79.02%)
39	no home	start	pow(.50)	814 (69.81%)	2987 (71.51%)	3146 (77.09%)
40	adj. ave.	start	pow(.75)	824 (70.67%)	3117 (74.62%)	3229 (79.12%)
41	ave.	start	pow(.75)	832 (71.36%)	3080 (73.74%)	3217 (78.83%)
42	no home	start	pow(.75)	823 (70.58%)	2985 (71.46%)	3148 (77.14%)
43	adj. ave.	start	pow(.90)	819 (70.24%)	3116 (74.60%)	3218 (78.85%)
44	ave.	start	pow(.90)	839 (71.96%)	3091 (74.00%)	3211 (78.68%)
45	no home	start	pow(.90)	828 (71.01%)	3001 (71.85%)	3157 (77.36%)
46	adj. ave.	start(.90)		824 (70.67%)	3108 (74.41%)	3214 (78.76%)
47	ave.	start(.90)		840 (72.04%)	3091 (74.00%)	3210 (78.66%)
48	no home	start(.90)		822 (70.50%)	3006 (71.97%)	3152 (77.24%)
49	adj. ave.	start(.90)	exp(.85)	827 (70.93%)	3104 (74.31%)	3167 (77.60%)
50	ave.	start(.90)	exp(.85)	825 (70.75%)	3072 (73.55%)	3168 (77.63%)
51	no home	start(.90)	exp(.85)	823 (70.58%)	2969 (71.08%)	3117 (76.38%)
52	adj. ave.	start(.90)	exp(.90)	825 (70.75%)	3116 (74.60%)	3181 (77.95%)
53	ave.	start(.90)	exp(.90)	837 (71.78%)	3083 (73.81%)	3176 (77.82%)
54	no home	start(.90)	exp(.90)	821 (70.41%)	2976 (71.25%)	3142 (76.99%)
55	adj. ave.	start(.90)	exp(.95)	823 (70.58%)	3123 (74.77%)	3192 (78.22%)
56	ave.	start(.90)	exp(.95)	841 (72.13%)	3095 (74.10%)	3190 (78.17%)

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	Enhancements			FB 1994	MBK 1994-1995	WBK 1994-1995
	Home	*Start*	*Other*	*Accuracy* *#Correct(%)*	*Accuracy* *#Correct(%)*	*Accuracy* *#Correct(%)*
57	no home	start(.90)	exp(.95)	824 (70.67%)	3004 (71.92%)	3144 (77.04%)
58	adj. ave.	start(.90)	pow(.50)	829 (71.10%)	3093 (74.05%)	3215 (78.78%)
59	ave.	start(.90)	pow(.50)	832 (71.36%)	3072 (73.55%)	3225 (79.02%)
60	no home	start(.90)	pow(.50)	816 (69.98%)	2989 (71.56%)	3142 (76.99%)
61	adj. ave.	start(.90)	pow(.75)	826 (70.84%)	3113 (74.53%)	3233 (79.22%)
62	ave.	start(.90)	pow(.75)	835 (71.61%)	3081 (73.76%)	3216 (78.80%)
63	no home	start(.90)	pow(.75)	823 (70.58%)	2992 (71.63%)	3148 (77.14%)
64	adj. ave.	start(.90)	pow(.90)	821 (70.41%)	3113 (74.53%)	3216 (78.80%)
65	ave.	start(.90)	pow(.90)	837 (71.78%)	3092 (74.02%)	3212 (78.71%)
66	no home	start(.90)	pow(.90)	827 (70.93%)	3002 (71.87%)	3149 (77.16%)
67	adj. ave.	start(.95)		824 (70.67%)	3108 (74.41%)	3214 (78.76%)
68	ave.	start(.95)		840 (72.04%)	3091 (74.00%)	3210 (78.66%)
69	no home	start(.95)		826 (70.84%)	3006 (71.97%)	3154 (77.28%)
70	adj. ave.	start(.95)	exp(.85)	826 (70.84%)	3100 (74.22%)	3165 (77.55%)
71	ave.	start(.95)	exp(.85)	823 (70.58%)	3076 (73.64%)	3169 (77.65%)
72	no home	start(.95)	exp(.85)	824 (70.67%)	2969 (71.08%)	3115 (76.33%)
73	adj. ave.	start(.95)	exp(.90)	825 (70.75%)	3115 (74.58%)	3183 (78.00%)
74	ave.	start(.95)	exp(.90)	833 (71.44%)	3087 (73.90%)	3176 (77.82%)

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	Enhancements			FB 1994 *Accuracy* *#Correct(%)*	MBK 1994-1995 *Accuracy* *#Correct(%)*	WBK 1994-1995 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	822 (70.50%)	2974 (71.20%)	3139 (76.92%)
76	adj. ave.	start(.95)	exp(.95)	821 (70.41%)	3120 (74.69%)	3197 (78.34%)
77	ave.	start(.95)	exp(.95)	841 (72.13%)	3092 (74.02%)	3188 (78.12%)
78	no home	start(.95)	exp(.95)	823 (70.58%)	3003 (71.89%)	3142 (76.99%)
79	adj. ave.	start(.95)	pow(.50)	826 (70.84%)	3086 (73.88%)	3217 (78.83%)
80	ave.	start(.95)	pow(.50)	833 (71.44%)	3073 (73.57%)	3224 (79.00%)
81	no home	start(.95)	pow(.50)	814 (69.81%)	2988 (71.53%)	3143 (77.02%)
82	adj. ave.	start(.95)	pow(.75)	825 (70.75%)	3114 (74.55%)	3227 (79.07%)
83	ave.	start(.95)	pow(.75)	833 (71.44%)	3080 (73.74%)	3216 (78.80%)
84	no home	start(.95)	pow(.75)	822 (70.50%)	2988 (71.53%)	3147 (77.11%)
85	adj. ave.	start(.95)	pow(.90)	821 (70.41%)	3120 (74.69%)	3218 (78.85%)
86	ave.	start(.95)	pow(.90)	838 (71.87%)	3092 (74.02%)	3213 (78.73%)
87	no home	start(.95)	pow(.90)	827 (70.93%)	3000 (71.82%)	3155 (77.31%)

Table 34: 1995-1996 Least Squares Results

	Enhancements			FB 1995 *Accuracy* *#Correct(%)*	MBK 1995-1996 *Accuracy* *#Correct(%)*	WBK 1995-1996 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		796 (67.17%)	3035 (71.99%)	3141 (76.22%)
2	ave.	no start		795 (67.09%)	3025 (71.75%)	3141 (76.22%)
3	no home	no start		762 (64.30%)	2850 (67.60%)	3005 (72.92%)
4	adj. ave.	no start	exp(.85)	805 (67.93%)	3040 (72.11%)	3138 (76.15%)
5	ave.	no start	exp(.85)	798 (67.34%)	3012 (71.44%)	3121 (75.73%)
6	no home	no start	exp(.85)	766 (64.64%)	2816 (66.79%)	2953 (71.66%)
7	adj. ave.	no start	exp(.90)	808 (68.19%)	3054 (72.44%)	3136 (76.10%)
8	ave.	no start	exp(.90)	797 (67.26%)	3040 (72.11%)	3119 (75.69%)
9	no home	no start	exp(.90)	774 (65.32%)	2835 (67.24%)	2989 (72.53%)
10	adj. ave.	no start	exp(.95)	809 (68.27%)	3059 (72.56%)	3133 (76.03%)
11	ave.	no start	exp(.95)	794 (67.00%)	3026 (71.77%)	3118 (75.66%)
12	no home	no start	exp(.95)	768 (64.81%)	2833 (67.20%)	2997 (72.73%)
13	adj. ave.	no start	ones	764 (64.47%)	2973 (70.52%)	3021 (73.31%)
14	ave.	no start	ones	768 (64.81%)	2973 (70.52%)	3020 (73.28%)
15	no home	no start	ones	738 (62.28%)	2782 (65.99%)	2882 (69.93%)
16	adj. ave.	no start	pow(.50)	799 (67.43%)	3054 (72.44%)	3134 (76.05%)
17	ave.	no start	pow(.50)	791 (66.75%)	3031 (71.89%)	3131 (75.98%)
18	no home	no start	pow(.50)	757 (63.88%)	2845 (67.48%)	3008 (72.99%)

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	Enhancements			FB 1995 *Accuracy #Correct(%)*	MBK 1995-1996 *Accuracy #Correct(%)*	WBK 1995-1996 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	803 (67.76%)	3048 (72.30%)	3146 (76.34%)
20	ave.	no start	pow(.75)	797 (67.26%)	3030 (71.87%)	3123 (75.78%)
21	no home	no start	pow(.75)	759 (64.05%)	2842 (67.41%)	3006 (72.94%)
22	adj. ave.	no start	pow(.90)	801 (67.59%)	3039 (72.08%)	3145 (76.32%)
23	ave.	no start	pow(.90)	798 (67.34%)	3026 (71.77%)	3131 (75.98%)
24	no home	no start	pow(.90)	763 (64.39%)	2851 (67.62%)	3013 (73.11%)
25	adj. ave.	start		875 (73.84%)	3094 (73.39%)	3233 (78.45%)
26	ave.	start		850 (71.73%)	3086 (73.20%)	3219 (78.11%)
27	no home	start		886 (74.77%)	2961 (70.23%)	3154 (76.53%)
28	adj. ave.	start	exp(.85)	877 (74.01%)	3089 (73.27%)	3173 (77.00%)
29	ave.	start	exp(.85)	850 (71.73%)	3062 (72.63%)	3180 (77.17%)
30	no home	start	exp(.85)	875 (73.84%)	2933 (69.57%)	3067 (74.42%)
31	adj. ave.	start	exp(.90)	876 (73.92%)	3097 (73.46%)	3207 (77.82%)
32	ave.	start	exp(.90)	852 (71.90%)	3089 (73.27%)	3193 (77.48%)
33	no home	start	exp(.90)	877 (74.01%)	2948 (69.92%)	3121 (75.73%)
34	adj. ave.	start	exp(.95)	880 (74.26%)	3103 (73.60%)	3219 (78.11%)
35	ave.	start	exp(.95)	852 (71.90%)	3082 (73.10%)	3210 (77.89%)
36	no home	start	exp(.95)	882 (74.43%)	2946 (69.88%)	3134 (76.05%)
37	adj. ave.	start	pow(.50)	871 (73.50%)	3099 (73.51%)	3236 (78.52%)

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	Enhancements			FB 1995 *Accuracy #Correct(%)*	MBK 1995-1996 *Accuracy #Correct(%)*	WBK 1995-1996 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	861 (72.66%)	3104 (73.62%)	3220 (78.14%)
39	no home	start	pow(.50)	876 (73.92%)	2960 (70.21%)	3148 (76.39%)
40	adj. ave.	start	pow(.75)	872 (73.59%)	3097 (73.46%)	3231 (78.40%)
41	ave.	start	pow(.75)	859 (72.49%)	3094 (73.39%)	3224 (78.23%)
42	no home	start	pow(.75)	877 (74.01%)	2959 (70.19%)	3151 (76.46%)
43	adj. ave.	start	pow(.90)	873 (73.67%)	3099 (73.51%)	3234 (78.48%)
44	ave.	start	pow(.90)	854 (72.07%)	3090 (73.29%)	3224 (78.23%)
45	no home	start	pow(.90)	882 (74.43%)	2963 (70.28%)	3155 (76.56%)
46	adj. ave.	start(.90)		875 (73.84%)	3094 (73.39%)	3233 (78.45%)
47	ave.	start(.90)		850 (71.73%)	3086 (73.20%)	3219 (78.11%)
48	no home	start(.90)		884 (74.60%)	2963 (70.28%)	3152 (76.49%)
49	adj. ave.	start(.90)	exp(.85)	874 (73.76%)	3092 (73.34%)	3176 (77.07%)
50	ave.	start(.90)	exp(.85)	847 (71.48%)	3056 (72.49%)	3175 (77.04%)
51	no home	start(.90)	exp(.85)	871 (73.50%)	2928 (69.45%)	3061 (74.28%)
52	adj. ave.	start(.90)	exp(.90)	874 (73.76%)	3109 (73.74%)	3206 (77.80%)
53	ave.	start(.90)	exp(.90)	850 (71.73%)	3081 (73.08%)	3194 (77.51%)
54	no home	start(.90)	exp(.90)	881 (74.35%)	2948 (69.92%)	3115 (75.59%)
55	adj. ave.	start(.90)	exp(.95)	872 (73.59%)	3111 (73.79%)	3231 (78.40%)
56	ave.	start(.90)	exp(.95)	852 (71.90%)	3080 (73.06%)	3207 (77.82%)

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	Enhancements			FB 1995 *Accuracy #Correct(%)*	MBK 1995-1996 *Accuracy #Correct(%)*	WBK 1995-1996 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	881 (74.35%)	2946 (69.88%)	3134 (76.05%)
58	adj. ave.	start(.90)	pow(.50)	872 (73.59%)	3113 (73.84%)	3230 (78.38%)
59	ave.	start(.90)	pow(.50)	858 (72.41%)	3104 (73.62%)	3211 (77.92%)
60	no home	start(.90)	pow(.50)	869 (73.33%)	2960 (70.21%)	3144 (76.29%)
61	adj. ave.	start(.90)	pow(.75)	867 (73.16%)	3104 (73.62%)	3235 (78.50%)
62	ave.	start(.90)	pow(.75)	855 (72.15%)	3085 (73.17%)	3222 (78.18%)
63	no home	start(.90)	pow(.75)	877 (74.01%)	2956 (70.11%)	3155 (76.56%)
64	adj. ave.	start(.90)	pow(.90)	867 (73.16%)	3103 (73.60%)	3236 (78.52%)
65	ave.	start(.90)	pow(.90)	853 (71.98%)	3081 (73.08%)	3220 (78.14%)
66	no home	start(.90)	pow(.90)	881 (74.35%)	2965 (70.33%)	3156 (76.58%)
67	adj. ave.	start(.95)		875 (73.84%)	3094 (73.39%)	3233 (78.45%)
68	ave.	start(.95)		850 (71.73%)	3086 (73.20%)	3219 (78.11%)
69	no home	start(.95)		885 (74.68%)	2960 (70.21%)	3154 (76.53%)
70	adj. ave.	start(.95)	exp(.85)	877 (74.01%)	3088 (73.24%)	3175 (77.04%)
71	ave.	start(.95)	exp(.85)	848 (71.56%)	3059 (72.56%)	3177 (77.09%)
72	no home	start(.95)	exp(.85)	874 (73.76%)	2931 (69.52%)	3067 (74.42%)
73	adj. ave.	start(.95)	exp(.90)	876 (73.92%)	3102 (73.58%)	3208 (77.85%)
74	ave.	start(.95)	exp(.90)	850 (71.73%)	3084 (73.15%)	3192 (77.46%)

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	Enhancements			FB 1995 *Accuracy* *#Correct(%)*	MBK 1995-1996 *Accuracy* *#Correct(%)*	WBK 1995-1996 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	878 (74.09%)	2950 (69.97%)	3118 (75.66%)
76	adj. ave.	start(.95)	exp(.95)	877 (74.01%)	3108 (73.72%)	3226 (78.28%)
77	ave.	start(.95)	exp(.95)	853 (71.98%)	3080 (73.06%)	3210 (77.89%)
78	no home	start(.95)	exp(.95)	880 (74.26%)	2945 (69.85%)	3134 (76.05%)
79	adj. ave.	start(.95)	pow(.50)	871 (73.50%)	3102 (73.58%)	3235 (78.50%)
80	ave.	start(.95)	pow(.50)	860 (72.57%)	3105 (73.65%)	3214 (77.99%)
81	no home	start(.95)	pow(.50)	873 (73.67%)	2959 (70.19%)	3144 (76.29%)
82	adj. ave.	start(.95)	pow(.75)	870 (73.42%)	3102 (73.58%)	3231 (78.40%)
83	ave.	start(.95)	pow(.75)	856 (72.24%)	3087 (73.22%)	3223 (78.21%)
84	no home	start(.95)	pow(.75)	875 (73.84%)	2956 (70.11%)	3150 (76.44%)
85	adj. ave.	start(.95)	pow(.90)	871 (73.50%)	3102 (73.58%)	3239 (78.60%)
86	ave.	start(.95)	pow(.90)	854 (72.07%)	3086 (73.20%)	3223 (78.21%)
87	no home	start(.95)	pow(.90)	880 (74.26%)	2962 (70.26%)	3156 (76.58%)

Table 35: 1996-1997 Least Squares Results

	Enhancements			FB 1996 *Accuracy* *#Correct(%)*	MBK 1996-1997 *Accuracy* *#Correct(%)*	WBK 1996-1997 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		830 (69.22%)	3177 (74.35%)	3133 (75.64%)
2	ave.	no start		829 (69.14%)	3143 (73.55%)	3131 (75.59%)
3	no home	no start		758 (63.22%)	2915 (68.22%)	3005 (72.55%)
4	adj. ave.	no start	exp(.85)	830 (69.22%)	3134 (73.34%)	3131 (75.59%)
5	ave.	no start	exp(.85)	827 (68.97%)	3124 (73.11%)	3126 (75.47%)
6	no home	no start	exp(.85)	761 (63.47%)	2880 (67.40%)	2984 (72.04%)
7	adj. ave.	no start	exp(.90)	832 (69.39%)	3158 (73.91%)	3151 (76.07%)
8	ave.	no start	exp(.90)	828 (69.06%)	3137 (73.41%)	3137 (75.74%)
9	no home	no start	exp(.90)	758 (63.22%)	2914 (68.20%)	3011 (72.69%)
10	adj. ave.	no start	exp(.95)	831 (69.31%)	3168 (74.14%)	3143 (75.88%)
11	ave.	no start	exp(.95)	830 (69.22%)	3137 (73.41%)	3140 (75.81%)
12	no home	no start	exp(.95)	757 (63.14%)	2921 (68.36%)	3017 (72.84%)
13	adj. ave.	no start	ones	791 (65.97%)	3075 (71.96%)	3059 (73.85%)
14	ave.	no start	ones	795 (66.31%)	3089 (72.29%)	3067 (74.05%)
15	no home	no start	ones	731 (60.97%)	2791 (65.32%)	2876 (69.44%)
16	adj. ave.	no start	pow(.50)	821 (68.47%)	3157 (73.88%)	3124 (75.42%)
17	ave.	no start	pow(.50)	821 (68.47%)	3138 (73.44%)	3134 (75.66%)
18	no home	no start	pow(.50)	753 (62.80%)	2888 (67.59%)	2988 (72.14%)

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	Enhancements			FB 1996 *Accuracy #Correct(%)*	MBK 1996-1997 *Accuracy #Correct(%)*	WBK 1996-1997 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	822 (68.56%)	3167 (74.12%)	3136 (75.71%)
20	ave.	no start	pow(.75)	822 (68.56%)	3139 (73.46%)	3132 (75.62%)
21	no home	no start	pow(.75)	758 (63.22%)	2912 (68.15%)	3000 (72.43%)
22	adj. ave.	no start	pow(.90)	828 (69.06%)	3168 (74.14%)	3137 (75.74%)
23	ave.	no start	pow(.90)	826 (68.89%)	3141 (73.51%)	3131 (75.59%)
24	no home	no start	pow(.90)	760 (63.39%)	2912 (68.15%)	3010 (72.67%)
25	adj. ave.	start		872 (72.73%)	3172 (74.23%)	3226 (77.89%)
26	ave.	start		877 (73.14%)	3168 (74.14%)	3221 (77.76%)
27	no home	start		862 (71.89%)	3014 (70.54%)	3151 (76.07%)
28	adj. ave.	start	exp(.85)	870 (72.56%)	3123 (73.09%)	3205 (77.38%)
29	ave.	start	exp(.85)	883 (73.64%)	3150 (73.72%)	3194 (77.11%)
30	no home	start	exp(.85)	862 (71.89%)	2978 (69.69%)	3116 (75.23%)
31	adj. ave.	start	exp(.90)	868 (72.39%)	3154 (73.81%)	3221 (77.76%)
32	ave.	start	exp(.90)	880 (73.39%)	3165 (74.07%)	3215 (77.62%)
33	no home	start	exp(.90)	866 (72.23%)	3004 (70.30%)	3141 (75.83%)
34	adj. ave.	start	exp(.95)	874 (72.89%)	3166 (74.09%)	3226 (77.89%)
35	ave.	start	exp(.95)	879 (73.31%)	3172 (74.23%)	3221 (77.76%)
36	no home	start	exp(.95)	865 (72.14%)	3005 (70.33%)	3158 (76.24%)
37	adj. ave.	start	pow(.50)	871 (72.64%)	3172 (74.23%)	3204 (77.35%)

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	Enhancements			FB 1996 *Accuracy #Correct(%)*	MBK 1996-1997 *Accuracy #Correct(%)*	WBK 1996-1997 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	875 (72.98%)	3174 (74.28%)	3222 (77.79%)
39	no home	start	pow(.50)	868 (72.39%)	2993 (70.04%)	3145 (75.93%)
40	adj. ave.	start	pow(.75)	873 (72.81%)	3166 (74.09%)	3224 (77.84%)
41	ave.	start	pow(.75)	875 (72.98%)	3181 (74.44%)	3235 (78.10%)
42	no home	start	pow(.75)	859 (71.64%)	3004 (70.30%)	3162 (76.34%)
43	adj. ave.	start	pow(.90)	874 (72.89%)	3174 (74.28%)	3229 (77.96%)
44	ave.	start	pow(.90)	876 (73.06%)	3177 (74.35%)	3218 (77.69%)
45	no home	start	pow(.90)	864 (72.06%)	3015 (70.56%)	3160 (76.29%)
46	adj. ave.	start(.90)		872 (72.73%)	3172 (74.23%)	3226 (77.89%)
47	ave.	start(.90)		877 (73.14%)	3168 (74.14%)	3221 (77.76%)
48	no home	start(.90)		858 (71.56%)	3019 (70.65%)	3150 (76.05%)
49	adj. ave.	start(.90)	exp(.85)	871 (72.64%)	3131 (73.27%)	3198 (77.21%)
50	ave.	start(.90)	exp(.85)	882 (73.56%)	3145 (73.60%)	3192 (77.06%)
51	no home	start(.90)	exp(.85)	864 (72.06%)	2981 (69.76%)	3110 (75.08%)
52	adj. ave.	start(.90)	exp(.90)	872 (72.73%)	3162 (74.00%)	3221 (77.76%)
53	ave.	start(.90)	exp(.90)	882 (73.56%)	3160 (73.95%)	3213 (77.57%)
54	no home	start(.90)	exp(.90)	864 (72.06%)	3009 (70.42%)	3146 (75.95%)
55	adj. ave.	start(.90)	exp(.95)	874 (72.89%)	3176 (74.33%)	3222 (77.79%)
56	ave.	start(.90)	exp(.95)	878 (73.23%)	3173 (74.26%)	3209 (77.47%)

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	Enhancements			FB 1996 *Accuracy* *#Correct(%)*	MBK 1996-1997 *Accuracy* *#Correct(%)*	WBK 1996-1997 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	863 (71.98%)	3014 (70.54%)	3156 (76.20%)
58	adj. ave.	start(.90)	pow(.50)	867 (72.31%)	3179 (74.40%)	3199 (77.23%)
59	ave.	start(.90)	pow(.50)	872 (72.73%)	3175 (74.30%)	3221 (77.76%)
60	no home	start(.90)	pow(.50)	861 (71.81%)	2993 (70.04%)	3141 (75.83%)
61	adj. ave.	start(.90)	pow(.75)	871 (72.64%)	3177 (74.35%)	3223 (77.81%)
62	ave.	start(.90)	pow(.75)	875 (72.98%)	3177 (74.35%)	3231 (78.01%)
63	no home	start(.90)	pow(.75)	858 (71.56%)	3001 (70.23%)	3160 (76.29%)
64	adj. ave.	start(.90)	pow(.90)	872 (72.73%)	3184 (74.51%)	3220 (77.74%)
65	ave.	start(.90)	pow(.90)	879 (73.31%)	3177 (74.35%)	3217 (77.67%)
66	no home	start(.90)	pow(.90)	861 (71.81%)	3014 (70.54%)	3156 (76.20%)
67	adj. ave.	start(.95)		872 (72.73%)	3172 (74.23%)	3226 (77.89%)
68	ave.	start(.95)		877 (73.14%)	3168 (74.14%)	3221 (77.76%)
69	no home	start(.95)		859 (71.64%)	3016 (70.58%)	3147 (75.98%)
70	adj. ave.	start(.95)	exp(.85)	867 (72.31%)	3124 (73.11%)	3202 (77.31%)
71	ave.	start(.95)	exp(.85)	882 (73.56%)	3149 (73.70%)	3194 (77.11%)
72	no home	start(.95)	exp(.85)	862 (71.89%)	2980 (69.74%)	3113 (75.16%)
73	adj. ave.	start(.95)	exp(.90)	869 (72.48%)	3158 (73.91%)	3219 (77.72%)
74	ave.	start(.95)	exp(.90)	880 (73.39%)	3163 (74.02%)	3214 (77.60%)

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	Enhancements			FB 1996 *Accuracy #Correct(%)*	MBK 1996-1997 *Accuracy #Correct(%)*	WBK 1996-1997 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	864 (72.06%)	3004 (70.30%)	3145 (75.93%)
76	adj. ave.	start(.95)	exp(.95)	872 (72.73%)	3172 (74.23%)	3225 (77.86%)
77	ave.	start(.95)	exp(.95)	879 (73.31%)	3171 (74.21%)	3219 (77.72%)
78	no home	start(.95)	exp(.95)	863 (71.98%)	3010 (70.44%)	3159 (76.27%)
79	adj. ave.	start(.95)	pow(.50)	870 (72.56%)	3175 (74.30%)	3201 (77.28%)
80	ave.	start(.95)	pow(.50)	874 (72.89%)	3179 (74.40%)	3219 (77.72%)
81	no home	start(.95)	pow(.50)	866 (72.23%)	2994 (70.07%)	3144 (75.91%)
82	adj. ave.	start(.95)	pow(.75)	868 (72.39%)	3174 (74.28%)	3220 (77.74%)
83	ave.	start(.95)	pow(.75)	876 (73.06%)	3177 (74.35%)	3238 (78.17%)
84	no home	start(.95)	pow(.75)	859 (71.64%)	3001 (70.23%)	3163 (76.36%)
85	adj. ave.	start(.95)	pow(.90)	874 (72.89%)	3178 (74.37%)	3223 (77.81%)
86	ave.	start(.95)	pow(.90)	878 (73.23%)	3177 (74.35%)	3218 (77.69%)
87	no home	start(.95)	pow(.90)	865 (72.14%)	3011 (70.47%)	3163 (76.36%)

Table 36: 1987-1988 Mean Absolute Deviation Results

	Enhancements			FB 1987 *Accuracy* *#Correct(%)*	MBK 1987-1988 *Accuracy* *#Correct(%)*	WBK 1987-1988 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		648 (63.22%)	2899 (71.58%)	2809 (75.21%)
2	ave.	no start		649 (63.32%)	2889 (71.33%)	2821 (75.53%)
3	no home	no start		535 (52.20%)	2566 (63.36%)	2556 (68.43%)
4	adj. ave.	no start	exp(.85)	663 (64.68%)	2717 (67.09%)	2651 (70.98%)
5	ave.	no start	exp(.85)	661 (64.49%)	2733 (67.48%)	2656 (71.11%)
6	no home	no start	exp(.85)	570 (55.61%)	2437 (60.17%)	2449 (65.57%)
7	adj. ave.	no start	exp(.90)	652 (63.61%)	2798 (69.09%)	2714 (72.66%)
8	ave.	no start	exp(.90)	652 (63.61%)	2779 (68.62%)	2721 (72.85%)
9	no home	no start	exp(.90)	570 (55.61%)	2507 (61.90%)	2504 (67.04%)
10	adj. ave.	no start	exp(.95)	653 (63.71%)	2915 (71.98%)	2796 (74.86%)
11	ave.	no start	exp(.95)	662 (64.59%)	2902 (71.65%)	2784 (74.54%)
12	no home	no start	exp(.95)	567 (55.32%)	2573 (63.53%)	2570 (68.81%)
13	adj. ave.	no start	ones	617 (60.20%)	2796 (69.04%)	2714 (72.66%)
14	ave.	no start	ones	618 (60.29%)	2788 (68.84%)	2695 (72.16%)
15	no home	no start	ones	304 (29.66%)	1460 (36.05%)	1562 (41.82%)
16	adj. ave.	no start	pow(.50)	655 (63.90%)	2899 (71.58%)	2821 (75.53%)
17	ave.	no start	pow(.50)	651 (63.51%)	2898 (71.56%)	2810 (75.23%)
18	no home	no start	pow(.50)	526 (51.32%)	2642 (65.23%)	2597 (69.53%)

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	Enhancements			FB 1987 *Accuracy* *#Correct(%)*	MBK 1987-1988 *Accuracy* *#Correct(%)*	WBK 1987-1988 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	651 (63.51%)	2911 (71.88%)	2796 (74.86%)
20	ave.	no start	pow(.75)	649 (63.32%)	2901 (71.63%)	2804 (75.07%)
21	no home	no start	pow(.75)	540 (52.68%)	2615 (64.57%)	2600 (69.61%)
22	adj. ave.	no start	pow(.90)	654 (63.80%)	2907 (71.78%)	2802 (75.02%)
23	ave.	no start	pow(.90)	653 (63.71%)	2897 (71.53%)	2825 (75.64%)
24	no home	no start	pow(.90)	540 (52.68%)	2619 (64.67%)	2608 (69.83%)

Table 37: 1988-1989 Mean Absolute Deviation Results

	Enhancements			FB 1988 *Accuracy* *#Correct(%)*	MBK 1988-1989 *Accuracy* *#Correct(%)*	WBK 1988-1989 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		697 (66.89%)	2945 (71.27%)	2884 (75.38%)
2	ave.	no start		696 (66.79%)	2949 (71.37%)	2885 (75.41%)
3	no home	no start		590 (56.62%)	2626 (63.55%)	2670 (69.79%)
4	adj. ave.	no start	exp(.85)	695 (66.70%)	2759 (66.77%)	2756 (72.03%)
5	ave.	no start	exp(.85)	698 (66.99%)	2783 (67.35%)	2757 (72.06%)
6	no home	no start	exp(.85)	622 (59.69%)	2539 (61.45%)	2514 (65.71%)
7	adj. ave.	no start	exp(.90)	702 (67.37%)	2867 (69.39%)	2837 (74.15%)
8	ave.	no start	exp(.90)	695 (66.70%)	2864 (69.31%)	2837 (74.15%)
9	no home	no start	exp(.90)	624 (59.88%)	2595 (62.80%)	2589 (67.67%)
10	adj. ave.	no start	exp(.95)	696 (66.79%)	2938 (71.10%)	2882 (75.33%)
11	ave.	no start	exp(.95)	698 (66.99%)	2923 (70.74%)	2885 (75.41%)
12	no home	no start	exp(.95)	625 (59.98%)	2612 (63.21%)	2644 (69.11%)
13	adj. ave.	no start	ones	665 (63.82%)	2884 (69.80%)	2769 (72.37%)
14	ave.	no start	ones	662 (63.53%)	2889 (69.92%)	2779 (72.63%)
15	no home	no start	ones	353 (33.88%)	1480 (35.82%)	1552 (40.56%)
16	adj. ave.	no start	pow(.50)	689 (66.12%)	2960 (71.64%)	2900 (75.80%)
17	ave.	no start	pow(.50)	692 (66.41%)	2937 (71.08%)	2913 (76.14%)
18	no home	no start	pow(.50)	598 (57.39%)	2655 (64.25%)	2725 (71.22%)

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	Enhancements			FB 1988 *Accuracy* *#Correct(%)*	MBK 1988-1989 *Accuracy* *#Correct(%)*	WBK 1988-1989 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	706 (67.75%)	2944 (71.25%)	2916 (76.22%)
20	ave.	no start	pow(.75)	690 (66.22%)	2927 (70.84%)	2910 (76.06%)
21	no home	no start	pow(.75)	605 (58.06%)	2681 (64.88%)	2719 (71.07%)
22	adj. ave.	no start	pow(.90)	694 (66.60%)	2951 (71.42%)	2903 (75.88%)
23	ave.	no start	pow(.90)	689 (66.12%)	2943 (71.22%)	2899 (75.77%)
24	no home	no start	pow(.90)	598 (57.39%)	2676 (64.76%)	2721 (71.12%)
25	adj. ave.	start		753 (72.26%)	3036 (73.48%)	3013 (78.75%)
26	ave.	start		722 (69.29%)	3009 (72.82%)	3015 (78.80%)
27	no home	start		724 (69.48%)	2885 (69.82%)	2935 (76.71%)
28	adj. ave.	start	exp(.85)	742 (71.21%)	2774 (67.13%)	2814 (73.55%)
29	ave.	start	exp(.85)	714 (68.52%)	2808 (67.96%)	2808 (73.39%)
30	no home	start	exp(.85)	721 (69.19%)	2629 (63.63%)	2648 (69.21%)
31	adj. ave.	start	exp(.90)	757 (72.65%)	2872 (69.51%)	2901 (75.82%)
32	ave.	start	exp(.90)	729 (69.96%)	2897 (70.11%)	2908 (76.01%)
33	no home	start	exp(.90)	744 (71.40%)	2700 (65.34%)	2725 (71.22%)
34	adj. ave.	start	exp(.95)	759 (72.84%)	2979 (72.10%)	2966 (77.52%)
35	ave.	start	exp(.95)	730 (70.06%)	2966 (71.78%)	2987 (78.07%)
36	no home	start	exp(.95)	739 (70.92%)	2779 (67.26%)	2834 (74.07%)
37	adj. ave.	start	pow(.50)	756 (72.55%)	3030 (73.33%)	3012 (78.72%)

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	Enhancements			FB 1988 *Accuracy* *#Correct(%)*	MBK 1988-1989 *Accuracy* *#Correct(%)*	WBK 1988-1989 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	737 (70.73%)	3009 (72.82%)	3012 (78.72%)
39	no home	start	pow(.50)	735 (70.54%)	2886 (69.85%)	2930 (76.58%)
40	adj. ave.	start	pow(.75)	760 (72.94%)	3029 (73.31%)	3028 (79.14%)
41	ave.	start	pow(.75)	738 (70.83%)	3005 (72.73%)	3031 (79.22%)
42	no home	start	pow(.75)	734 (70.44%)	2882 (69.75%)	2941 (76.87%)
43	adj. ave.	start	pow(.90)	758 (72.74%)	3040 (73.57%)	3023 (79.01%)
44	ave.	start	pow(.90)	728 (69.87%)	3005 (72.73%)	3012 (78.72%)
45	no home	start	pow(.90)	725 (69.58%)	2889 (69.92%)	2942 (76.89%)
46	adj. ave.	start(.90)		749 (71.88%)	3046 (73.72%)	3026 (79.09%)
47	ave.	start(.90)		718 (68.91%)	3011 (72.87%)	3011 (78.70%)
48	no home	start(.90)		724 (69.48%)	2877 (69.63%)	2945 (76.97%)
49	adj. ave.	start(.90)	exp(.85)	741 (71.11%)	2771 (67.06%)	2811 (73.47%)
50	ave.	start(.90)	exp(.85)	714 (68.52%)	2804 (67.86%)	2806 (73.34%)
51	no home	start(.90)	exp(.85)	716 (68.71%)	2630 (63.65%)	2648 (69.21%)
52	adj. ave.	start(.90)	exp(.90)	750 (71.98%)	2875 (69.58%)	2908 (76.01%)
53	ave.	start(.90)	exp(.90)	734 (70.44%)	2900 (70.18%)	2914 (76.16%)
54	no home	start(.90)	exp(.90)	745 (71.50%)	2697 (65.27%)	2724 (71.20%)
55	adj. ave.	start(.90)	exp(.95)	751 (72.07%)	2979 (72.10%)	2971 (77.65%)
56	ave.	start(.90)	exp(.95)	731 (70.15%)	2957 (71.56%)	2987 (78.07%)

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	Enhancements			FB 1988 *Accuracy* *#Correct(%)*	MBK 1988-1989 *Accuracy* *#Correct(%)*	WBK 1988-1989 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	739 (70.92%)	2787 (67.45%)	2828 (73.92%)
58	adj. ave.	start(.90)	pow(.50)	746 (71.59%)	3019 (73.06%)	3005 (78.54%)
59	ave.	start(.90)	pow(.50)	727 (69.77%)	3009 (72.82%)	3024 (79.04%)
60	no home	start(.90)	pow(.50)	716 (68.71%)	2884 (69.80%)	2935 (76.71%)
61	adj. ave.	start(.90)	pow(.75)	744 (71.40%)	3017 (73.02%)	3031 (79.22%)
62	ave.	start(.90)	pow(.75)	743 (71.31%)	3003 (72.68%)	3015 (78.80%)
63	no home	start(.90)	pow(.75)	735 (70.54%)	2890 (69.94%)	2951 (77.13%)
64	adj. ave.	start(.90)	pow(.90)	755 (72.46%)	3029 (73.31%)	3028 (79.14%)
65	ave.	start(.90)	pow(.90)	735 (70.54%)	3014 (72.94%)	3016 (78.83%)
66	no home	start(.90)	pow(.90)	719 (69.00%)	2884 (69.80%)	2934 (76.69%)
67	adj. ave.	start(.95)		753 (72.26%)	3038 (73.52%)	3018 (78.88%)
68	ave.	start(.95)		717 (68.81%)	3010 (72.85%)	3022 (78.99%)
69	no home	start(.95)		727 (69.77%)	2881 (69.72%)	2947 (77.03%)
70	adj. ave.	start(.95)	exp(.85)	737 (70.73%)	2772 (67.09%)	2813 (73.52%)
71	ave.	start(.95)	exp(.85)	713 (68.43%)	2809 (67.98%)	2810 (73.44%)
72	no home	start(.95)	exp(.85)	718 (68.91%)	2631 (63.67%)	2650 (69.26%)
73	adj. ave.	start(.95)	exp(.90)	753 (72.26%)	2875 (69.58%)	2899 (75.77%)
74	ave.	start(.95)	exp(.90)	729 (69.96%)	2895 (70.06%)	2912 (76.11%)

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	Enhancements			FB 1988 *Accuracy* *#Correct(%)*	MBK 1988-1989 *Accuracy* *#Correct(%)*	WBK 1988-1989 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	744 (71.40%)	2700 (65.34%)	2722 (71.14%)
76	adj. ave.	start(.95)	exp(.95)	753 (72.26%)	2976 (72.02%)	2968 (77.57%)
77	ave.	start(.95)	exp(.95)	733 (70.35%)	2955 (71.52%)	2981 (77.91%)
78	no home	start(.95)	exp(.95)	738 (70.83%)	2780 (67.28%)	2829 (73.94%)
79	adj. ave.	start(.95)	pow(.50)	749 (71.88%)	3030 (73.33%)	3005 (78.54%)
80	ave.	start(.95)	pow(.50)	732 (70.25%)	3005 (72.73%)	3015 (78.80%)
81	no home	start(.95)	pow(.50)	733 (70.35%)	2882 (69.75%)	2931 (76.61%)
82	adj. ave.	start(.95)	pow(.75)	753 (72.26%)	3027 (73.26%)	3022 (78.99%)
83	ave.	start(.95)	pow(.75)	737 (70.73%)	3016 (72.99%)	3020 (78.93%)
84	no home	start(.95)	pow(.75)	731 (70.15%)	2890 (69.94%)	2946 (77.00%)
85	adj. ave.	start(.95)	pow(.90)	745 (71.50%)	3035 (73.45%)	3025 (79.06%)
86	ave.	start(.95)	pow(.90)	723 (69.39%)	3017 (73.02%)	3016 (78.83%)
87	no home	start(.95)	pow(.90)	720 (69.10%)	2888 (69.89%)	2938 (76.79%)

Table 38: 1989-1990 Mean Absolute Deviation Results

	Enhancements			FB 1989 *Accuracy* *#Correct(%)*	MBK 1989-1990 *Accuracy* *#Correct(%)*	WBK 1989-1990 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		707 (67.79%)	2980 (71.98%)	2869 (74.50%)
2	ave.	no start		711 (68.17%)	2966 (71.64%)	2867 (74.45%)
3	no home	no start		578 (55.42%)	2620 (63.29%)	2657 (69.00%)
4	adj. ave.	no start	exp(.85)	696 (66.73%)	2811 (67.90%)	2685 (69.72%)
5	ave.	no start	exp(.85)	699 (67.02%)	2785 (67.27%)	2688 (69.80%)
6	no home	no start	exp(.85)	598 (57.33%)	2494 (60.24%)	2561 (66.50%)
7	adj. ave.	no start	exp(.90)	712 (68.26%)	2880 (69.57%)	2773 (72.01%)
8	ave.	no start	exp(.90)	711 (68.17%)	2875 (69.44%)	2769 (71.90%)
9	no home	no start	exp(.90)	605 (58.01%)	2582 (62.37%)	2611 (67.80%)
10	adj. ave.	no start	exp(.95)	724 (69.42%)	2954 (71.35%)	2846 (73.90%)
11	ave.	no start	exp(.95)	724 (69.42%)	2934 (70.87%)	2846 (73.90%)
12	no home	no start	exp(.95)	610 (58.49%)	2647 (63.94%)	2701 (70.14%)
13	adj. ave.	no start	ones	665 (63.76%)	2875 (69.44%)	2760 (71.67%)
14	ave.	no start	ones	668 (64.05%)	2859 (69.06%)	2771 (71.96%)
15	no home	no start	ones	337 (32.31%)	1512 (36.52%)	1586 (41.18%)
16	adj. ave.	no start	pow(.50)	701 (67.21%)	3014 (72.80%)	2862 (74.32%)
17	ave.	no start	pow(.50)	710 (68.07%)	2994 (72.32%)	2868 (74.47%)
18	no home	no start	pow(.50)	581 (55.70%)	2682 (64.78%)	2698 (70.06%)

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	Enhancements			FB 1989 *Accuracy* *#Correct(%)*	MBK 1989-1990 *Accuracy* *#Correct(%)*	WBK 1989-1990 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	704 (67.50%)	2994 (72.32%)	2868 (74.47%)
20	ave.	no start	pow(.75)	700 (67.11%)	2996 (72.37%)	2869 (74.50%)
21	no home	no start	pow(.75)	583 (55.90%)	2688 (64.93%)	2712 (70.42%)
22	adj. ave.	no start	pow(.90)	719 (68.94%)	3001 (72.49%)	2878 (74.73%)
23	ave.	no start	pow(.90)	712 (68.26%)	2980 (71.98%)	2851 (74.03%)
24	no home	no start	pow(.90)	589 (56.47%)	2694 (65.07%)	2703 (70.19%)
25	adj. ave.	start		744 (71.33%)	3093 (74.71%)	3019 (78.40%)
26	ave.	start		753 (72.20%)	3055 (73.79%)	3015 (78.29%)
27	no home	start		734 (70.37%)	2905 (70.17%)	2946 (76.50%)
28	adj. ave.	start	exp(.85)	724 (69.42%)	2805 (67.75%)	2778 (72.14%)
29	ave.	start	exp(.85)	732 (70.18%)	2787 (67.32%)	2774 (72.03%)
30	no home	start	exp(.85)	695 (66.63%)	2606 (62.95%)	2706 (70.27%)
31	adj. ave.	start	exp(.90)	736 (70.57%)	2902 (70.10%)	2870 (74.53%)
32	ave.	start	exp(.90)	739 (70.85%)	2880 (69.57%)	2873 (74.60%)
33	no home	start	exp(.90)	706 (67.69%)	2708 (65.41%)	2758 (71.62%)
34	adj. ave.	start	exp(.95)	742 (71.14%)	2988 (72.17%)	2949 (76.58%)
35	ave.	start	exp(.95)	736 (70.57%)	2969 (71.71%)	2955 (76.73%)
36	no home	start	exp(.95)	726 (69.61%)	2810 (67.87%)	2882 (74.84%)
37	adj. ave.	start	pow(.50)	746 (71.52%)	3081 (74.42%)	3008 (78.11%)

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	Enhancements			FB 1989 *Accuracy* *#Correct(%)*	MBK 1989-1990 *Accuracy* *#Correct(%)*	WBK 1989-1990 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	738 (70.76%)	3073 (74.23%)	3015 (78.29%)
39	no home	start	pow(.50)	734 (70.37%)	2902 (70.10%)	2946 (76.50%)
40	adj. ave.	start	pow(.75)	746 (71.52%)	3099 (74.86%)	3029 (78.65%)
41	ave.	start	pow(.75)	745 (71.43%)	3077 (74.32%)	3023 (78.50%)
42	no home	start	pow(.75)	736 (70.57%)	2921 (70.56%)	2960 (76.86%)
43	adj. ave.	start	pow(.90)	748 (71.72%)	3090 (74.64%)	3016 (78.32%)
44	ave.	start	pow(.90)	750 (71.91%)	3070 (74.15%)	3016 (78.32%)
45	no home	start	pow(.90)	724 (69.42%)	2925 (70.65%)	2956 (76.76%)
46	adj. ave.	start(.90)		742 (71.14%)	3086 (74.54%)	3011 (78.19%)
47	ave.	start(.90)		755 (72.39%)	3047 (73.60%)	3000 (77.90%)
48	no home	start(.90)		736 (70.57%)	2902 (70.10%)	2960 (76.86%)
49	adj. ave.	start(.90)	exp(.85)	724 (69.42%)	2809 (67.85%)	2786 (72.34%)
50	ave.	start(.90)	exp(.85)	727 (69.70%)	2795 (67.51%)	2783 (72.27%)
51	no home	start(.90)	exp(.85)	702 (67.31%)	2606 (62.95%)	2708 (70.32%)
52	adj. ave.	start(.90)	exp(.90)	736 (70.57%)	2902 (70.10%)	2868 (74.47%)
53	ave.	start(.90)	exp(.90)	735 (70.47%)	2886 (69.71%)	2867 (74.45%)
54	no home	start(.90)	exp(.90)	707 (67.79%)	2706 (65.36%)	2756 (71.57%)
55	adj. ave.	start(.90)	exp(.95)	738 (70.76%)	2986 (72.13%)	2938 (76.29%)
56	ave.	start(.90)	exp(.95)	748 (71.72%)	2974 (71.84%)	2962 (76.92%)

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	Enhancements			FB 1989 *Accuracy #Correct(%)*	MBK 1989-1990 *Accuracy #Correct(%)*	WBK 1989-1990 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	721 (69.13%)	2804 (67.73%)	2880 (74.79%)
58	adj. ave.	start(.90)	pow(.50)	744 (71.33%)	3072 (74.20%)	3003 (77.98%)
59	ave.	start(.90)	pow(.50)	734 (70.37%)	3071 (74.18%)	2993 (77.72%)
60	no home	start(.90)	pow(.50)	730 (69.99%)	2882 (69.61%)	2957 (76.79%)
61	adj. ave.	start(.90)	pow(.75)	740 (70.95%)	3096 (74.78%)	3033 (78.76%)
62	ave.	start(.90)	pow(.75)	750 (71.91%)	3062 (73.96%)	3011 (78.19%)
63	no home	start(.90)	pow(.75)	735 (70.47%)	2917 (70.46%)	2962 (76.92%)
64	adj. ave.	start(.90)	pow(.90)	747 (71.62%)	3067 (74.08%)	3019 (78.40%)
65	ave.	start(.90)	pow(.90)	743 (71.24%)	3060 (73.91%)	3004 (78.01%)
66	no home	start(.90)	pow(.90)	726 (69.61%)	2916 (70.43%)	2957 (76.79%)
67	adj. ave.	start(.95)		748 (71.72%)	3093 (74.71%)	3020 (78.42%)
68	ave.	start(.95)		753 (72.20%)	3051 (73.70%)	3010 (78.16%)
69	no home	start(.95)		730 (69.99%)	2921 (70.56%)	2955 (76.73%)
70	adj. ave.	start(.95)	exp(.85)	722 (69.22%)	2808 (67.83%)	2782 (72.24%)
71	ave.	start(.95)	exp(.85)	727 (69.70%)	2791 (67.42%)	2780 (72.19%)
72	no home	start(.95)	exp(.85)	699 (67.02%)	2605 (62.92%)	2706 (70.27%)
73	adj. ave.	start(.95)	exp(.90)	735 (70.47%)	2903 (70.12%)	2867 (74.45%)
74	ave.	start(.95)	exp(.90)	736 (70.57%)	2884 (69.66%)	2873 (74.60%)

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	Enhancements			FB 1989 *Accuracy #Correct(%)*	MBK 1989-1990 *Accuracy #Correct(%)*	WBK 1989-1990 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	708 (67.88%)	2712 (65.51%)	2755 (71.54%)
76	adj. ave.	start(.95)	exp(.95)	738 (70.76%)	2985 (72.10%)	2948 (76.55%)
77	ave.	start(.95)	exp(.95)	741 (71.05%)	2973 (71.81%)	2963 (76.94%)
78	no home	start(.95)	exp(.95)	722 (69.22%)	2803 (67.71%)	2889 (75.02%)
79	adj. ave.	start(.95)	pow(.50)	752 (72.10%)	3089 (74.61%)	3002 (77.95%)
80	ave.	start(.95)	pow(.50)	743 (71.24%)	3074 (74.25%)	3004 (78.01%)
81	no home	start(.95)	pow(.50)	736 (70.57%)	2895 (69.93%)	2955 (76.73%)
82	adj. ave.	start(.95)	pow(.75)	741 (71.05%)	3090 (74.64%)	3025 (78.55%)
83	ave.	start(.95)	pow(.75)	740 (70.95%)	3060 (73.91%)	3026 (78.58%)
84	no home	start(.95)	pow(.75)	734 (70.37%)	2918 (70.48%)	2969 (77.10%)
85	adj. ave.	start(.95)	pow(.90)	743 (71.24%)	3075 (74.28%)	3014 (78.27%)
86	ave.	start(.95)	pow(.90)	753 (72.20%)	3061 (73.94%)	3007 (78.08%)
87	no home	start(.95)	pow(.90)	726 (69.61%)	2929 (70.75%)	2958 (76.81%)

Table 39: 1990-1991 Mean Absolute Deviation Results

	Enhancements			FB 1990 *Accuracy* *#Correct(%)*	MBK 1990-1991 *Accuracy* *#Correct(%)*	WBK 1990-1991 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		672 (64.24%)	3024 (71.68%)	2984 (75.81%)
2	ave.	no start		676 (64.63%)	3004 (71.20%)	2973 (75.53%)
3	no home	no start		557 (53.25%)	2678 (63.47%)	2708 (68.80%)
4	adj. ave.	no start	exp(.85)	692 (66.16%)	2853 (67.62%)	2748 (69.82%)
5	ave.	no start	exp(.85)	698 (66.73%)	2844 (67.41%)	2752 (69.92%)
6	no home	no start	exp(.85)	611 (58.41%)	2540 (60.20%)	2597 (65.98%)
7	adj. ave.	no start	exp(.90)	693 (66.25%)	2933 (69.52%)	2845 (72.28%)
8	ave.	no start	exp(.90)	691 (66.06%)	2933 (69.52%)	2856 (72.56%)
9	no home	no start	exp(.90)	617 (58.99%)	2616 (62.01%)	2652 (67.38%)
10	adj. ave.	no start	exp(.95)	706 (67.50%)	3008 (71.30%)	2937 (74.62%)
11	ave.	no start	exp(.95)	689 (65.87%)	2993 (70.94%)	2930 (74.44%)
12	no home	no start	exp(.95)	615 (58.80%)	2696 (63.90%)	2725 (69.23%)
13	adj. ave.	no start	ones	660 (63.10%)	2936 (69.59%)	2816 (71.54%)
14	ave.	no start	ones	659 (63.00%)	2937 (69.61%)	2817 (71.57%)
15	no home	no start	ones	340 (32.50%)	1575 (37.33%)	1612 (40.96%)
16	adj. ave.	no start	pow(.50)	686 (65.58%)	3024 (71.68%)	2952 (75.00%)
17	ave.	no start	pow(.50)	674 (64.44%)	3016 (71.49%)	2943 (74.77%)
18	no home	no start	pow(.50)	556 (53.15%)	2725 (64.59%)	2767 (70.30%)

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	Enhancements			FB 1990 *Accuracy #Correct(%)*	MBK 1990-1991 *Accuracy #Correct(%)*	WBK 1990-1991 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	676 (64.63%)	3020 (71.58%)	2965 (75.33%)
20	ave.	no start	pow(.75)	671 (64.15%)	3029 (71.79%)	2973 (75.53%)
21	no home	no start	pow(.75)	577 (55.16%)	2722 (64.52%)	2774 (70.48%)
22	adj. ave.	no start	pow(.90)	680 (65.01%)	3022 (71.63%)	2981 (75.74%)
23	ave.	no start	pow(.90)	670 (64.05%)	3010 (71.34%)	2969 (75.43%)
24	no home	no start	pow(.90)	562 (53.73%)	2738 (64.90%)	2753 (69.94%)
25	adj. ave.	start		735 (70.27%)	3129 (74.16%)	3076 (78.15%)
26	ave.	start		727 (69.50%)	3087 (73.17%)	3101 (78.79%)
27	no home	start		712 (68.07%)	2972 (70.44%)	2969 (75.43%)
28	adj. ave.	start	exp(.85)	720 (68.83%)	2881 (68.29%)	2832 (71.95%)
29	ave.	start	exp(.85)	721 (68.93%)	2889 (68.48%)	2841 (72.18%)
30	no home	start	exp(.85)	705 (67.40%)	2672 (63.33%)	2742 (69.66%)
31	adj. ave.	start	exp(.90)	729 (69.69%)	2956 (70.06%)	2921 (74.21%)
32	ave.	start	exp(.90)	720 (68.83%)	2975 (70.51%)	2933 (74.52%)
33	no home	start	exp(.90)	726 (69.41%)	2746 (65.09%)	2815 (71.52%)
34	adj. ave.	start	exp(.95)	729 (69.69%)	3062 (72.58%)	3050 (77.49%)
35	ave.	start	exp(.95)	731 (69.89%)	3058 (72.48%)	3047 (77.41%)
36	no home	start	exp(.95)	720 (68.83%)	2873 (68.10%)	2930 (74.44%)
37	adj. ave.	start	pow(.50)	735 (70.27%)	3098 (73.43%)	3096 (78.66%)

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	Enhancements			FB 1990 *Accuracy #Correct(%)*	MBK 1990-1991 *Accuracy #Correct(%)*	WBK 1990-1991 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	735 (70.27%)	3102 (73.52%)	3099 (78.73%)
39	no home	start	pow(.50)	730 (69.79%)	2961 (70.18%)	2982 (75.76%)
40	adj. ave.	start	pow(.75)	741 (70.84%)	3122 (74.00%)	3085 (78.38%)
41	ave.	start	pow(.75)	731 (69.89%)	3093 (73.31%)	3124 (79.37%)
42	no home	start	pow(.75)	716 (68.45%)	2979 (70.61%)	2982 (75.76%)
43	adj. ave.	start	pow(.90)	743 (71.03%)	3118 (73.90%)	3081 (78.28%)
44	ave.	start	pow(.90)	740 (70.75%)	3093 (73.31%)	3108 (78.96%)
45	no home	start	pow(.90)	707 (67.59%)	2973 (70.47%)	2981 (75.74%)
46	adj. ave.	start(.90)		732 (69.98%)	3128 (74.14%)	3079 (78.23%)
47	ave.	start(.90)		731 (69.89%)	3080 (73.00%)	3104 (78.86%)
48	no home	start(.90)		704 (67.30%)	2954 (70.02%)	2972 (75.51%)
49	adj. ave.	start(.90)	exp(.85)	725 (69.31%)	2889 (68.48%)	2834 (72.00%)
50	ave.	start(.90)	exp(.85)	722 (69.02%)	2892 (68.55%)	2845 (72.28%)
51	no home	start(.90)	exp(.85)	712 (68.07%)	2673 (63.36%)	2741 (69.64%)
52	adj. ave.	start(.90)	exp(.90)	731 (69.89%)	2960 (70.16%)	2930 (74.44%)
53	ave.	start(.90)	exp(.90)	722 (69.02%)	2977 (70.56%)	2942 (74.75%)
54	no home	start(.90)	exp(.90)	721 (68.93%)	2749 (65.16%)	2823 (71.72%)
55	adj. ave.	start(.90)	exp(.95)	725 (69.31%)	3080 (73.00%)	3055 (77.62%)
56	ave.	start(.90)	exp(.95)	730 (69.79%)	3056 (72.43%)	3043 (77.31%)

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	Enhancements			FB 1990 *Accuracy* *#Correct(%)*	MBK 1990-1991 *Accuracy* *#Correct(%)*	WBK 1990-1991 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	714 (68.26%)	2874 (68.12%)	2934 (74.54%)
58	adj. ave.	start(.90)	pow(.50)	740 (70.75%)	3086 (73.15%)	3094 (78.61%)
59	ave.	start(.90)	pow(.50)	729 (69.69%)	3097 (73.41%)	3102 (78.81%)
60	no home	start(.90)	pow(.50)	718 (68.64%)	2936 (69.59%)	3000 (76.22%)
61	adj. ave.	start(.90)	pow(.75)	734 (70.17%)	3107 (73.64%)	3093 (78.58%)
62	ave.	start(.90)	pow(.75)	734 (70.17%)	3103 (73.55%)	3111 (79.04%)
63	no home	start(.90)	pow(.75)	708 (67.69%)	2955 (70.04%)	2997 (76.14%)
64	adj. ave.	start(.90)	pow(.90)	734 (70.17%)	3127 (74.12%)	3102 (78.81%)
65	ave.	start(.90)	pow(.90)	734 (70.17%)	3073 (72.84%)	3098 (78.71%)
66	no home	start(.90)	pow(.90)	712 (68.07%)	2968 (70.35%)	2991 (75.99%)
67	adj. ave.	start(.95)		743 (71.03%)	3132 (74.24%)	3086 (78.40%)
68	ave.	start(.95)		737 (70.46%)	3071 (72.79%)	3113 (79.09%)
69	no home	start(.95)		708 (67.69%)	2964 (70.25%)	2974 (75.56%)
70	adj. ave.	start(.95)	exp(.85)	723 (69.12%)	2882 (68.31%)	2831 (71.93%)
71	ave.	start(.95)	exp(.85)	725 (69.31%)	2890 (68.50%)	2846 (72.31%)
72	no home	start(.95)	exp(.85)	709 (67.78%)	2669 (63.26%)	2743 (69.69%)
73	adj. ave.	start(.95)	exp(.90)	725 (69.31%)	2956 (70.06%)	2925 (74.31%)
74	ave.	start(.95)	exp(.90)	720 (68.83%)	2978 (70.59%)	2941 (74.72%)

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	Enhancements			FB 1990 *Accuracy #Correct(%)*	MBK 1990-1991 *Accuracy #Correct(%)*	WBK 1990-1991 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	726 (69.41%)	2746 (65.09%)	2819 (71.62%)
76	adj. ave.	start(.95)	exp(.95)	729 (69.69%)	3074 (72.86%)	3054 (77.59%)
77	ave.	start(.95)	exp(.95)	735 (70.27%)	3057 (72.46%)	3045 (77.36%)
78	no home	start(.95)	exp(.95)	712 (68.07%)	2871 (68.05%)	2929 (74.42%)
79	adj. ave.	start(.95)	pow(.50)	732 (69.98%)	3091 (73.26%)	3093 (78.58%)
80	ave.	start(.95)	pow(.50)	724 (69.22%)	3094 (73.33%)	3101 (78.79%)
81	no home	start(.95)	pow(.50)	724 (69.22%)	2954 (70.02%)	2994 (76.07%)
82	adj. ave.	start(.95)	pow(.75)	732 (69.98%)	3111 (73.74%)	3099 (78.73%)
83	ave.	start(.95)	pow(.75)	742 (70.94%)	3085 (73.12%)	3109 (78.99%)
84	no home	start(.95)	pow(.75)	711 (67.97%)	2981 (70.66%)	2993 (76.04%)
85	adj. ave.	start(.95)	pow(.90)	737 (70.46%)	3123 (74.02%)	3097 (78.68%)
86	ave.	start(.95)	pow(.90)	743 (71.03%)	3088 (73.19%)	3119 (79.24%)
87	no home	start(.95)	pow(.90)	709 (67.78%)	2970 (70.40%)	2983 (75.79%)

Table 40: 1991-1992 Mean Absolute Deviation Results

	Enhancements			FB 1991 *Accuracy* *#Correct(%)*	MBK 1991-1992 *Accuracy* *#Correct(%)*	WBK 1991-1992 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		725 (68.59%)	3055 (72.34%)	3024 (75.26%)
2	ave.	no start		725 (68.59%)	3034 (71.84%)	3024 (75.26%)
3	no home	no start		599 (56.67%)	2755 (65.24%)	2749 (68.42%)
4	adj. ave.	no start	exp(.85)	716 (67.74%)	2877 (68.13%)	2884 (71.78%)
5	ave.	no start	exp(.85)	707 (66.89%)	2867 (67.89%)	2868 (71.38%)
6	no home	no start	exp(.85)	640 (60.55%)	2547 (60.31%)	2638 (65.65%)
7	adj. ave.	no start	exp(.90)	722 (68.31%)	2950 (69.86%)	2938 (73.12%)
8	ave.	no start	exp(.90)	726 (68.68%)	2947 (69.78%)	2934 (73.02%)
9	no home	no start	exp(.90)	637 (60.26%)	2646 (62.66%)	2704 (67.30%)
10	adj. ave.	no start	exp(.95)	727 (68.78%)	3022 (71.56%)	3016 (75.06%)
11	ave.	no start	exp(.95)	732 (69.25%)	3014 (71.37%)	3018 (75.11%)
12	no home	no start	exp(.95)	633 (59.89%)	2742 (64.93%)	2781 (69.21%)
13	adj. ave.	no start	ones	724 (68.50%)	2953 (69.93%)	2875 (71.55%)
14	ave.	no start	ones	732 (69.25%)	2957 (70.02%)	2884 (71.78%)
15	no home	no start	ones	347 (32.83%)	1609 (38.10%)	1651 (41.09%)
16	adj. ave.	no start	pow(.50)	725 (68.59%)	3048 (72.18%)	3016 (75.06%)
17	ave.	no start	pow(.50)	733 (69.35%)	3047 (72.15%)	3019 (75.14%)
18	no home	no start	pow(.50)	601 (56.86%)	2788 (66.02%)	2789 (69.41%)

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	Enhancements			FB 1991 *Accuracy #Correct(%)*	MBK 1991-1992 *Accuracy #Correct(%)*	WBK 1991-1992 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	731 (69.16%)	3059 (72.44%)	3032 (75.46%)
20	ave.	no start	pow(.75)	727 (68.78%)	3030 (71.75%)	3030 (75.41%)
21	no home	no start	pow(.75)	602 (56.95%)	2801 (66.33%)	2817 (70.11%)
22	adj. ave.	no start	pow(.90)	739 (69.91%)	3054 (72.32%)	3029 (75.39%)
23	ave.	no start	pow(.90)	718 (67.93%)	3048 (72.18%)	3039 (75.63%)
24	no home	no start	pow(.90)	607 (57.43%)	2806 (66.45%)	2804 (69.79%)
25	adj. ave.	start		744 (70.39%)	3147 (74.52%)	3132 (77.95%)
26	ave.	start		743 (70.29%)	3106 (73.55%)	3120 (77.65%)
27	no home	start		742 (70.20%)	3036 (71.89%)	3038 (75.61%)
28	adj. ave.	start	exp(.85)	732 (69.25%)	2885 (68.32%)	2889 (71.90%)
29	ave.	start	exp(.85)	724 (68.50%)	2896 (68.58%)	2888 (71.88%)
30	no home	start	exp(.85)	720 (68.12%)	2668 (63.18%)	2731 (67.97%)
31	adj. ave.	start	exp(.90)	744 (70.39%)	2969 (70.31%)	2982 (74.22%)
32	ave.	start	exp(.90)	738 (69.82%)	2967 (70.26%)	2980 (74.17%)
33	no home	start	exp(.90)	726 (68.68%)	2789 (66.04%)	2827 (70.36%)
34	adj. ave.	start	exp(.95)	734 (69.44%)	3062 (72.51%)	3072 (76.46%)
35	ave.	start	exp(.95)	746 (70.58%)	3058 (72.41%)	3059 (76.13%)
36	no home	start	exp(.95)	738 (69.82%)	2903 (68.74%)	2943 (73.25%)
37	adj. ave.	start	pow(.50)	750 (70.96%)	3103 (73.48%)	3100 (77.15%)

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	Enhancements			FB 1991 *Accuracy* *#Correct(%)*	MBK 1991-1992 *Accuracy* *#Correct(%)*	WBK 1991-1992 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	752 (71.14%)	3090 (73.17%)	3109 (77.38%)
39	no home	start	pow(.50)	732 (69.25%)	3016 (71.42%)	3015 (75.04%)
40	adj. ave.	start	pow(.75)	753 (71.24%)	3132 (74.17%)	3109 (77.38%)
41	ave.	start	pow(.75)	746 (70.58%)	3120 (73.88%)	3126 (77.80%)
42	no home	start	pow(.75)	741 (70.10%)	3035 (71.87%)	3040 (75.66%)
43	adj. ave.	start	pow(.90)	743 (70.29%)	3154 (74.69%)	3136 (78.05%)
44	ave.	start	pow(.90)	743 (70.29%)	3112 (73.69%)	3141 (78.17%)
45	no home	start	pow(.90)	746 (70.58%)	3061 (72.48%)	3024 (75.26%)
46	adj. ave.	start(.90)		745 (70.48%)	3147 (74.52%)	3137 (78.07%)
47	ave.	start(.90)		750 (70.96%)	3085 (73.05%)	3114 (77.50%)
48	no home	start(.90)		740 (70.01%)	3046 (72.13%)	3035 (75.54%)
49	adj. ave.	start(.90)	exp(.85)	732 (69.25%)	2882 (68.25%)	2886 (71.83%)
50	ave.	start(.90)	exp(.85)	722 (68.31%)	2894 (68.53%)	2894 (72.03%)
51	no home	start(.90)	exp(.85)	721 (68.21%)	2677 (63.39%)	2732 (67.99%)
52	adj. ave.	start(.90)	exp(.90)	748 (70.77%)	2974 (70.42%)	2986 (74.32%)
53	ave.	start(.90)	exp(.90)	736 (69.63%)	2961 (70.12%)	2976 (74.07%)
54	no home	start(.90)	exp(.90)	723 (68.40%)	2786 (65.97%)	2823 (70.26%)
55	adj. ave.	start(.90)	exp(.95)	756 (71.52%)	3048 (72.18%)	3066 (76.31%)
56	ave.	start(.90)	exp(.95)	748 (70.77%)	3062 (72.51%)	3056 (76.06%)

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	Enhancements			FB 1991 *Accuracy* *#Correct(%)*	MBK 1991-1992 *Accuracy* *#Correct(%)*	WBK 1991-1992 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	741 (70.10%)	2897 (68.60%)	2938 (73.12%)
58	adj. ave.	start(.90)	pow(.50)	762 (72.09%)	3103 (73.48%)	3099 (77.13%)
59	ave.	start(.90)	pow(.50)	752 (71.14%)	3103 (73.48%)	3109 (77.38%)
60	no home	start(.90)	pow(.50)	739 (69.91%)	3022 (71.56%)	3012 (74.96%)
61	adj. ave.	start(.90)	pow(.75)	753 (71.24%)	3154 (74.69%)	3125 (77.78%)
62	ave.	start(.90)	pow(.75)	764 (72.28%)	3114 (73.74%)	3114 (77.50%)
63	no home	start(.90)	pow(.75)	738 (69.82%)	3030 (71.75%)	3033 (75.49%)
64	adj. ave.	start(.90)	pow(.90)	744 (70.39%)	3152 (74.64%)	3134 (78.00%)
65	ave.	start(.90)	pow(.90)	752 (71.14%)	3101 (73.43%)	3122 (77.70%)
66	no home	start(.90)	pow(.90)	741 (70.10%)	3022 (71.56%)	3034 (75.51%)
67	adj. ave.	start(.95)		746 (70.58%)	3146 (74.50%)	3131 (77.92%)
68	ave.	start(.95)		747 (70.67%)	3089 (73.15%)	3122 (77.70%)
69	no home	start(.95)		737 (69.73%)	3031 (71.77%)	3033 (75.49%)
70	adj. ave.	start(.95)	exp(.85)	730 (69.06%)	2885 (68.32%)	2890 (71.93%)
71	ave.	start(.95)	exp(.85)	722 (68.31%)	2896 (68.58%)	2887 (71.85%)
72	no home	start(.95)	exp(.85)	720 (68.12%)	2674 (63.32%)	2729 (67.92%)
73	adj. ave.	start(.95)	exp(.90)	746 (70.58%)	2972 (70.38%)	2984 (74.27%)
74	ave.	start(.95)	exp(.90)	741 (70.10%)	2963 (70.16%)	2980 (74.17%)

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	Enhancements			FB 1991 *Accuracy* *#Correct(%)*	MBK 1991-1992 *Accuracy* *#Correct(%)*	WBK 1991-1992 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	725 (68.59%)	2790 (66.07%)	2823 (70.26%)
76	adj. ave.	start(.95)	exp(.95)	746 (70.58%)	3060 (72.46%)	3072 (76.46%)
77	ave.	start(.95)	exp(.95)	748 (70.77%)	3059 (72.44%)	3056 (76.06%)
78	no home	start(.95)	exp(.95)	739 (69.91%)	2897 (68.60%)	2940 (73.17%)
79	adj. ave.	start(.95)	pow(.50)	756 (71.52%)	3108 (73.60%)	3091 (76.93%)
80	ave.	start(.95)	pow(.50)	751 (71.05%)	3082 (72.98%)	3109 (77.38%)
81	no home	start(.95)	pow(.50)	742 (70.20%)	3021 (71.54%)	3020 (75.16%)
82	adj. ave.	start(.95)	pow(.75)	759 (71.81%)	3135 (74.24%)	3120 (77.65%)
83	ave.	start(.95)	pow(.75)	762 (72.09%)	3113 (73.72%)	3115 (77.53%)
84	no home	start(.95)	pow(.75)	741 (70.10%)	3029 (71.73%)	3039 (75.63%)
85	adj. ave.	start(.95)	pow(.90)	748 (70.77%)	3154 (74.69%)	3133 (77.97%)
86	ave.	start(.95)	pow(.90)	745 (70.48%)	3116 (73.79%)	3124 (77.75%)
87	no home	start(.95)	pow(.90)	747 (70.67%)	3047 (72.15%)	3036 (75.56%)

Table 41: 1992-1993 Mean Absolute Deviation Results

	Enhancements			FB 1992 *Accuracy* *#Correct(%)*	MBK 1992-1993 *Accuracy* *#Correct(%)*	WBK 1992-1993 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		691 (65.87%)	2888 (70.82%)	2879 (73.43%)
2	ave.	no start		686 (65.40%)	2865 (70.26%)	2859 (72.92%)
3	no home	no start		549 (52.34%)	2589 (63.49%)	2707 (69.04%)
4	adj. ave.	no start	exp(.85)	674 (64.25%)	2763 (67.75%)	2721 (69.40%)
5	ave.	no start	exp(.85)	674 (64.25%)	2760 (67.68%)	2706 (69.01%)
6	no home	no start	exp(.85)	574 (54.72%)	2486 (60.96%)	2585 (65.93%)
7	adj. ave.	no start	exp(.90)	686 (65.40%)	2829 (69.37%)	2781 (70.93%)
8	ave.	no start	exp(.90)	685 (65.30%)	2824 (69.25%)	2780 (70.90%)
9	no home	no start	exp(.90)	576 (54.91%)	2556 (62.68%)	2649 (67.56%)
10	adj. ave.	no start	exp(.95)	697 (66.44%)	2905 (71.24%)	2875 (73.32%)
11	ave.	no start	exp(.95)	693 (66.06%)	2902 (71.16%)	2872 (73.25%)
12	no home	no start	exp(.95)	576 (54.91%)	2632 (64.54%)	2724 (69.47%)
13	adj. ave.	no start	ones	692 (65.97%)	2853 (69.96%)	2730 (69.63%)
14	ave.	no start	ones	686 (65.40%)	2827 (69.32%)	2731 (69.65%)
15	no home	no start	ones	331 (31.55%)	1502 (36.83%)	1562 (39.84%)
16	adj. ave.	no start	pow(.50)	694 (66.16%)	2918 (71.55%)	2853 (72.76%)
17	ave.	no start	pow(.50)	695 (66.25%)	2888 (70.82%)	2860 (72.94%)
18	no home	no start	pow(.50)	555 (52.91%)	2621 (64.27%)	2686 (68.50%)

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	Enhancements			FB 1992 *Accuracy* *#Correct(%)*	MBK 1992-1993 *Accuracy* *#Correct(%)*	WBK 1992-1993 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	687 (65.49%)	2913 (71.43%)	2870 (73.20%)
20	ave.	no start	pow(.75)	687 (65.49%)	2882 (70.67%)	2856 (72.84%)
21	no home	no start	pow(.75)	557 (53.10%)	2646 (64.88%)	2739 (69.85%)
22	adj. ave.	no start	pow(.90)	687 (65.49%)	2903 (71.19%)	2867 (73.12%)
23	ave.	no start	pow(.90)	687 (65.49%)	2871 (70.40%)	2851 (72.71%)
24	no home	no start	pow(.90)	564 (53.77%)	2645 (64.86%)	2743 (69.96%)
25	adj. ave.	start		745 (71.02%)	3016 (73.96%)	3047 (77.71%)
26	ave.	start		739 (70.45%)	2985 (73.20%)	3034 (77.38%)
27	no home	start		720 (68.64%)	2892 (70.92%)	2995 (76.38%)
28	adj. ave.	start	exp(.85)	708 (67.49%)	2756 (67.58%)	2788 (71.10%)
29	ave.	start	exp(.85)	704 (67.11%)	2779 (68.15%)	2765 (70.52%)
30	no home	start	exp(.85)	686 (65.40%)	2588 (63.46%)	2699 (68.83%)
31	adj. ave.	start	exp(.90)	729 (69.49%)	2856 (70.03%)	2873 (73.27%)
32	ave.	start	exp(.90)	730 (69.59%)	2852 (69.94%)	2873 (73.27%)
33	no home	start	exp(.90)	699 (66.63%)	2687 (65.89%)	2806 (71.56%)
34	adj. ave.	start	exp(.95)	741 (70.64%)	2965 (72.71%)	2991 (76.28%)
35	ave.	start	exp(.95)	743 (70.83%)	2941 (72.12%)	2976 (75.90%)
36	no home	start	exp(.95)	712 (67.87%)	2795 (68.54%)	2905 (74.09%)
37	adj. ave.	start	pow(.50)	739 (70.45%)	3021 (74.08%)	3005 (76.64%)

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	Enhancements			FB 1992 *Accuracy #Correct(%)*	MBK 1992-1993 *Accuracy #Correct(%)*	WBK 1992-1993 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	751 (71.59%)	3003 (73.64%)	3032 (77.33%)
39	no home	start	pow(.50)	725 (69.11%)	2861 (70.16%)	2948 (75.18%)
40	adj. ave.	start	pow(.75)	747 (71.21%)	3016 (73.96%)	3018 (76.97%)
41	ave.	start	pow(.75)	751 (71.59%)	2983 (73.15%)	3025 (77.15%)
42	no home	start	pow(.75)	726 (69.21%)	2882 (70.67%)	2985 (76.13%)
43	adj. ave.	start	pow(.90)	744 (70.92%)	3008 (73.76%)	3038 (77.48%)
44	ave.	start	pow(.90)	750 (71.50%)	2976 (72.98%)	3024 (77.12%)
45	no home	start	pow(.90)	720 (68.64%)	2881 (70.65%)	3001 (76.54%)
46	adj. ave.	start(.90)		741 (70.64%)	3014 (73.91%)	3048 (77.74%)
47	ave.	start(.90)		743 (70.83%)	2978 (73.03%)	3026 (77.17%)
48	no home	start(.90)		715 (68.16%)	2883 (70.70%)	3001 (76.54%)
49	adj. ave.	start(.90)	exp(.85)	696 (66.35%)	2763 (67.75%)	2788 (71.10%)
50	ave.	start(.90)	exp(.85)	702 (66.92%)	2785 (68.29%)	2770 (70.65%)
51	no home	start(.90)	exp(.85)	683 (65.11%)	2590 (63.51%)	2706 (69.01%)
52	adj. ave.	start(.90)	exp(.90)	727 (69.30%)	2864 (70.23%)	2880 (73.45%)
53	ave.	start(.90)	exp(.90)	731 (69.69%)	2852 (69.94%)	2874 (73.30%)
54	no home	start(.90)	exp(.90)	703 (67.02%)	2688 (65.91%)	2797 (71.33%)
55	adj. ave.	start(.90)	exp(.95)	746 (71.12%)	2967 (72.76%)	2984 (76.10%)
56	ave.	start(.90)	exp(.95)	745 (71.02%)	2936 (72.00%)	2974 (75.85%)

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	Enhancements			FB 1992 *Accuracy* *#Correct(%)*	MBK 1992-1993 *Accuracy* *#Correct(%)*	WBK 1992-1993 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	711 (67.78%)	2784 (68.27%)	2892 (73.76%)
58	adj. ave.	start(.90)	pow(.50)	749 (71.40%)	3007 (73.74%)	3016 (76.92%)
59	ave.	start(.90)	pow(.50)	749 (71.40%)	2985 (73.20%)	3022 (77.07%)
60	no home	start(.90)	pow(.50)	718 (68.45%)	2871 (70.40%)	2949 (75.21%)
61	adj. ave.	start(.90)	pow(.75)	745 (71.02%)	2998 (73.52%)	3011 (76.79%)
62	ave.	start(.90)	pow(.75)	746 (71.12%)	2989 (73.30%)	3012 (76.82%)
63	no home	start(.90)	pow(.75)	725 (69.11%)	2881 (70.65%)	2987 (76.18%)
64	adj. ave.	start(.90)	pow(.90)	742 (70.73%)	3017 (73.98%)	3027 (77.20%)
65	ave.	start(.90)	pow(.90)	744 (70.92%)	2985 (73.20%)	3018 (76.97%)
66	no home	start(.90)	pow(.90)	720 (68.64%)	2880 (70.62%)	2994 (76.36%)
67	adj. ave.	start(.95)		743 (70.83%)	3011 (73.84%)	3044 (77.63%)
68	ave.	start(.95)		740 (70.54%)	2978 (73.03%)	3028 (77.23%)
69	no home	start(.95)		718 (68.45%)	2881 (70.65%)	2998 (76.46%)
70	adj. ave.	start(.95)	exp(.85)	702 (66.92%)	2753 (67.51%)	2791 (71.18%)
71	ave.	start(.95)	exp(.85)	701 (66.83%)	2785 (68.29%)	2769 (70.62%)
72	no home	start(.95)	exp(.85)	684 (65.20%)	2588 (63.46%)	2699 (68.83%)
73	adj. ave.	start(.95)	exp(.90)	723 (68.92%)	2856 (70.03%)	2874 (73.30%)
74	ave.	start(.95)	exp(.90)	724 (69.02%)	2853 (69.96%)	2873 (73.27%)

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	Enhancements			FB 1992 *Accuracy #Correct(%)*	MBK 1992-1993 *Accuracy #Correct(%)*	WBK 1992-1993 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	699 (66.63%)	2687 (65.89%)	2801 (71.44%)
76	adj. ave.	start(.95)	exp(.95)	745 (71.02%)	2974 (72.93%)	2987 (76.18%)
77	ave.	start(.95)	exp(.95)	744 (70.92%)	2938 (72.05%)	2976 (75.90%)
78	no home	start(.95)	exp(.95)	713 (67.97%)	2794 (68.51%)	2904 (74.06%)
79	adj. ave.	start(.95)	pow(.50)	755 (71.97%)	3014 (73.91%)	3011 (76.79%)
80	ave.	start(.95)	pow(.50)	757 (72.16%)	3003 (73.64%)	3045 (77.66%)
81	no home	start(.95)	pow(.50)	713 (67.97%)	2863 (70.21%)	2943 (75.06%)
82	adj. ave.	start(.95)	pow(.75)	749 (71.40%)	3013 (73.88%)	3020 (77.02%)
83	ave.	start(.95)	pow(.75)	745 (71.02%)	2995 (73.44%)	3028 (77.23%)
84	no home	start(.95)	pow(.75)	722 (68.83%)	2881 (70.65%)	2994 (76.36%)
85	adj. ave.	start(.95)	pow(.90)	741 (70.64%)	3003 (73.64%)	3033 (77.35%)
86	ave.	start(.95)	pow(.90)	754 (71.88%)	2982 (73.12%)	3017 (76.94%)
87	no home	start(.95)	pow(.90)	715 (68.16%)	2894 (70.97%)	3002 (76.56%)

Table 42: 1993-1994 Mean Absolute Deviation Results

	Enhancements			FB 1993 *Accuracy* *#Correct(%)*	MBK 1993-1994 *Accuracy* *#Correct(%)*	WBK 1993-1994 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		793 (68.30%)	2980 (71.72%)	3053 (76.10%)
2	ave.	no start		790 (68.04%)	2954 (71.10%)	3026 (75.42%)
3	no home	no start		617 (53.14%)	2643 (63.61%)	2792 (69.59%)
4	adj. ave.	no start	exp(.85)	767 (66.06%)	2803 (67.46%)	2915 (72.66%)
5	ave.	no start	exp(.85)	781 (67.27%)	2796 (67.29%)	2906 (72.43%)
6	no home	no start	exp(.85)	661 (56.93%)	2536 (61.03%)	2721 (67.82%)
7	adj. ave.	no start	exp(.90)	783 (67.44%)	2924 (70.37%)	2986 (74.43%)
8	ave.	no start	exp(.90)	785 (67.61%)	2888 (69.51%)	2980 (74.28%)
9	no home	no start	exp(.90)	661 (56.93%)	2631 (63.32%)	2769 (69.02%)
10	adj. ave.	no start	exp(.95)	801 (68.99%)	2984 (71.82%)	3017 (75.20%)
11	ave.	no start	exp(.95)	795 (68.48%)	2947 (70.93%)	3001 (74.80%)
12	no home	no start	exp(.95)	658 (56.68%)	2660 (64.02%)	2844 (70.89%)
13	adj. ave.	no start	ones	732 (63.05%)	2888 (69.51%)	2889 (72.01%)
14	ave.	no start	ones	733 (63.14%)	2878 (69.27%)	2889 (72.01%)
15	no home	no start	ones	353 (30.40%)	1533 (36.90%)	1702 (42.42%)
16	adj. ave.	no start	pow(.50)	754 (64.94%)	2958 (71.19%)	3018 (75.22%)
17	ave.	no start	pow(.50)	759 (65.37%)	2964 (71.34%)	3008 (74.98%)
18	no home	no start	pow(.50)	634 (54.61%)	2691 (64.77%)	2831 (70.56%)

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	Enhancements			FB 1993 *Accuracy #Correct(%)*	MBK 1993-1994 *Accuracy #Correct(%)*	WBK 1993-1994 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	785 (67.61%)	2992 (72.01%)	3051 (76.05%)
20	ave.	no start	pow(.75)	793 (68.30%)	2983 (71.79%)	3045 (75.90%)
21	no home	no start	pow(.75)	633 (54.52%)	2694 (64.84%)	2840 (70.79%)
22	adj. ave.	no start	pow(.90)	787 (67.79%)	2981 (71.74%)	3060 (76.27%)
23	ave.	no start	pow(.90)	791 (68.13%)	2956 (71.14%)	3029 (75.50%)
24	no home	no start	pow(.90)	628 (54.09%)	2705 (65.10%)	2834 (70.64%)
25	adj. ave.	start		819 (70.54%)	3068 (73.84%)	3187 (79.44%)
26	ave.	start		822 (70.80%)	3048 (73.36%)	3145 (78.39%)
27	no home	start		797 (68.65%)	2908 (69.99%)	3076 (76.67%)
28	adj. ave.	start	exp(.85)	785 (67.61%)	2807 (67.56%)	2934 (73.13%)
29	ave.	start	exp(.85)	779 (67.10%)	2813 (67.70%)	2951 (73.55%)
30	no home	start	exp(.85)	768 (66.15%)	2642 (63.59%)	2829 (70.51%)
31	adj. ave.	start	exp(.90)	808 (69.60%)	2912 (70.08%)	3011 (75.05%)
32	ave.	start	exp(.90)	811 (69.85%)	2913 (70.11%)	3023 (75.35%)
33	no home	start	exp(.90)	776 (66.84%)	2751 (66.21%)	2896 (72.18%)
34	adj. ave.	start	exp(.95)	803 (69.16%)	3000 (72.20%)	3104 (77.37%)
35	ave.	start	exp(.95)	818 (70.46%)	2977 (71.65%)	3075 (76.65%)
36	no home	start	exp(.95)	779 (67.10%)	2815 (67.75%)	2987 (74.45%)
37	adj. ave.	start	pow(.50)	815 (70.20%)	3023 (72.76%)	3129 (77.99%)

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	Enhancements			FB 1993 *Accuracy #Correct(%)*	MBK 1993-1994 *Accuracy #Correct(%)*	WBK 1993-1994 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	811 (69.85%)	3033 (73.00%)	3138 (78.22%)
39	no home	start	pow(.50)	795 (68.48%)	2913 (70.11%)	3072 (76.57%)
40	adj. ave.	start	pow(.75)	802 (69.08%)	3060 (73.65%)	3166 (78.91%)
41	ave.	start	pow(.75)	814 (70.11%)	3063 (73.72%)	3151 (78.54%)
42	no home	start	pow(.75)	799 (68.82%)	2940 (70.76%)	3065 (76.40%)
43	adj. ave.	start	pow(.90)	811 (69.85%)	3067 (73.81%)	3172 (79.06%)
44	ave.	start	pow(.90)	816 (70.28%)	3045 (73.29%)	3154 (78.61%)
45	no home	start	pow(.90)	804 (69.25%)	2927 (70.45%)	3069 (76.50%)
46	adj. ave.	start(.90)		812 (69.94%)	3059 (73.62%)	3176 (79.16%)
47	ave.	start(.90)		818 (70.46%)	3039 (73.14%)	3139 (78.24%)
48	no home	start(.90)		799 (68.82%)	2902 (69.84%)	3065 (76.40%)
49	adj. ave.	start(.90)	exp(.85)	774 (66.67%)	2819 (67.85%)	2948 (73.48%)
50	ave.	start(.90)	exp(.85)	782 (67.36%)	2812 (67.68%)	2946 (73.43%)
51	no home	start(.90)	exp(.85)	769 (66.24%)	2643 (63.61%)	2829 (70.51%)
52	adj. ave.	start(.90)	exp(.90)	809 (69.68%)	2925 (70.40%)	3014 (75.12%)
53	ave.	start(.90)	exp(.90)	812 (69.94%)	2909 (70.01%)	3022 (75.32%)
54	no home	start(.90)	exp(.90)	774 (66.67%)	2748 (66.14%)	2894 (72.13%)
55	adj. ave.	start(.90)	exp(.95)	805 (69.34%)	3015 (72.56%)	3095 (77.14%)
56	ave.	start(.90)	exp(.95)	821 (70.71%)	2977 (71.65%)	3067 (76.45%)

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	Enhancements			FB 1993 *Accuracy #Correct(%)*	MBK 1993-1994 *Accuracy #Correct(%)*	WBK 1993-1994 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	774 (66.67%)	2824 (67.97%)	2994 (74.63%)
58	adj. ave.	start(.90)	pow(.50)	810 (69.77%)	3031 (72.95%)	3156 (78.66%)
59	ave.	start(.90)	pow(.50)	809 (69.68%)	3005 (72.32%)	3142 (78.32%)
60	no home	start(.90)	pow(.50)	801 (68.99%)	2932 (70.57%)	3065 (76.40%)
61	adj. ave.	start(.90)	pow(.75)	811 (69.85%)	3060 (73.65%)	3175 (79.14%)
62	ave.	start(.90)	pow(.75)	810 (69.77%)	3061 (73.67%)	3132 (78.07%)
63	no home	start(.90)	pow(.75)	807 (69.51%)	2921 (70.30%)	3078 (76.72%)
64	adj. ave.	start(.90)	pow(.90)	815 (70.20%)	3071 (73.91%)	3173 (79.09%)
65	ave.	start(.90)	pow(.90)	812 (69.94%)	3037 (73.09%)	3148 (78.46%)
66	no home	start(.90)	pow(.90)	800 (68.91%)	2937 (70.69%)	3064 (76.37%)
67	adj. ave.	start(.95)		809 (69.68%)	3067 (73.81%)	3182 (79.31%)
68	ave.	start(.95)		813 (70.03%)	3046 (73.31%)	3139 (78.24%)
69	no home	start(.95)		796 (68.56%)	2913 (70.11%)	3076 (76.67%)
70	adj. ave.	start(.95)	exp(.85)	777 (66.93%)	2815 (67.75%)	2944 (73.38%)
71	ave.	start(.95)	exp(.85)	779 (67.10%)	2814 (67.73%)	2948 (73.48%)
72	no home	start(.95)	exp(.85)	770 (66.32%)	2640 (63.54%)	2832 (70.59%)
73	adj. ave.	start(.95)	exp(.90)	809 (69.68%)	2920 (70.28%)	3012 (75.07%)
74	ave.	start(.95)	exp(.90)	809 (69.68%)	2911 (70.06%)	3024 (75.37%)

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	Enhancements			FB 1993 *Accuracy* *#Correct(%)*	MBK 1993-1994 *Accuracy* *#Correct(%)*	WBK 1993-1994 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	777 (66.93%)	2748 (66.14%)	2896 (72.18%)
76	adj. ave.	start(.95)	exp(.95)	805 (69.34%)	3011 (72.47%)	3104 (77.37%)
77	ave.	start(.95)	exp(.95)	818 (70.46%)	2975 (71.60%)	3078 (76.72%)
78	no home	start(.95)	exp(.95)	776 (66.84%)	2819 (67.85%)	2987 (74.45%)
79	adj. ave.	start(.95)	pow(.50)	818 (70.46%)	3022 (72.73%)	3151 (78.54%)
80	ave.	start(.95)	pow(.50)	814 (70.11%)	3020 (72.68%)	3141 (78.29%)
81	no home	start(.95)	pow(.50)	800 (68.91%)	2917 (70.20%)	3066 (76.42%)
82	adj. ave.	start(.95)	pow(.75)	815 (70.20%)	3057 (73.57%)	3172 (79.06%)
83	ave.	start(.95)	pow(.75)	815 (70.20%)	3071 (73.91%)	3134 (78.12%)
84	no home	start(.95)	pow(.75)	792 (68.22%)	2935 (70.64%)	3071 (76.55%)
85	adj. ave.	start(.95)	pow(.90)	822 (70.80%)	3072 (73.94%)	3157 (78.69%)
86	ave.	start(.95)	pow(.90)	811 (69.85%)	3041 (73.19%)	3148 (78.46%)
87	no home	start(.95)	pow(.90)	801 (68.99%)	2923 (70.35%)	3070 (76.52%)

Table 43: 1994-1995 Mean Absolute Deviation Results

	Enhancements			FB 1994 *Accuracy*	MBK 1994-1995 *Accuracy*	WBK 1994-1995 *Accuracy*
	Home	*Start*	*Other*	*#Correct(%)*	*#Correct(%)*	*#Correct(%)*
1	adj. ave.	no start		753 (64.58%)	2979 (71.40%)	3052 (74.82%)
2	ave.	no start		755 (64.75%)	2934 (70.33%)	3045 (74.65%)
3	no home	no start		620 (53.17%)	2695 (64.60%)	2823 (69.21%)
4	adj. ave.	no start	exp(.85)	748 (64.15%)	2793 (66.95%)	2912 (71.39%)
5	ave.	no start	exp(.85)	743 (63.72%)	2772 (66.44%)	2898 (71.05%)
6	no home	no start	exp(.85)	658 (56.43%)	2540 (60.88%)	2707 (66.36%)
7	adj. ave.	no start	exp(.90)	741 (63.55%)	2846 (68.22%)	2978 (73.01%)
8	ave.	no start	exp(.90)	750 (64.32%)	2824 (67.69%)	2954 (72.42%)
9	no home	no start	exp(.90)	665 (57.03%)	2618 (62.75%)	2740 (67.17%)
10	adj. ave.	no start	exp(.95)	737 (63.21%)	2960 (70.95%)	3023 (74.11%)
11	ave.	no start	exp(.95)	736 (63.12%)	2907 (69.68%)	3012 (73.84%)
12	no home	no start	exp(.95)	651 (55.83%)	2714 (65.05%)	2833 (69.45%)
13	adj. ave.	no start	ones	738 (63.29%)	2850 (68.31%)	2982 (73.11%)
14	ave.	no start	ones	734 (62.95%)	2860 (68.55%)	2956 (72.47%)
15	no home	no start	ones	374 (32.08%)	1497 (35.88%)	1709 (41.90%)
16	adj. ave.	no start	pow(.50)	753 (64.58%)	2990 (71.67%)	3042 (74.58%)
17	ave.	no start	pow(.50)	749 (64.24%)	2938 (70.42%)	3047 (74.70%)
18	no home	no start	pow(.50)	617 (52.92%)	2723 (65.27%)	2864 (70.21%)

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	Enhancements			FB 1994 *Accuracy #Correct(%)*	MBK 1994-1995 *Accuracy #Correct(%)*	WBK 1994-1995 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	738 (63.29%)	2994 (71.76%)	3055 (74.90%)
20	ave.	no start	pow(.75)	760 (65.18%)	2967 (71.12%)	3050 (74.77%)
21	no home	no start	pow(.75)	627 (53.77%)	2719 (65.17%)	2859 (70.09%)
22	adj. ave.	no start	pow(.90)	749 (64.24%)	2992 (71.72%)	3067 (75.19%)
23	ave.	no start	pow(.90)	767 (65.78%)	2945 (70.59%)	3032 (74.33%)
24	no home	no start	pow(.90)	624 (53.52%)	2731 (65.46%)	2857 (70.04%)
25	adj. ave.	start		802 (68.78%)	3079 (73.80%)	3162 (77.52%)
26	ave.	start		804 (68.95%)	3022 (72.44%)	3173 (77.79%)
27	no home	start		805 (69.04%)	2955 (70.83%)	3109 (76.22%)
28	adj. ave.	start	exp(.85)	799 (68.52%)	2817 (67.52%)	2960 (72.57%)
29	ave.	start	exp(.85)	783 (67.15%)	2794 (66.97%)	2948 (72.27%)
30	no home	start	exp(.85)	781 (66.98%)	2648 (63.47%)	2842 (69.67%)
31	adj. ave.	start	exp(.90)	807 (69.21%)	2891 (69.30%)	3061 (75.04%)
32	ave.	start	exp(.90)	778 (66.72%)	2864 (68.65%)	3034 (74.38%)
33	no home	start	exp(.90)	799 (68.52%)	2732 (65.48%)	2901 (71.12%)
34	adj. ave.	start	exp(.95)	785 (67.32%)	3032 (72.67%)	3118 (76.44%)
35	ave.	start	exp(.95)	787 (67.50%)	2957 (70.88%)	3097 (75.93%)
36	no home	start	exp(.95)	789 (67.67%)	2878 (68.98%)	3021 (74.06%)
37	adj. ave.	start	pow(.50)	807 (69.21%)	3060 (73.35%)	3154 (77.32%)

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	Enhancements			FB 1994 *Accuracy #Correct(%)*	MBK 1994-1995 *Accuracy #Correct(%)*	WBK 1994-1995 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	803 (68.87%)	3004 (72.00%)	3151 (77.25%)
39	no home	start	pow(.50)	829 (71.10%)	2912 (69.80%)	3092 (75.80%)
40	adj. ave.	start	pow(.75)	803 (68.87%)	3060 (73.35%)	3161 (77.49%)
41	ave.	start	pow(.75)	810 (69.47%)	3022 (72.44%)	3169 (77.69%)
42	no home	start	pow(.75)	808 (69.30%)	2930 (70.23%)	3101 (76.02%)
43	adj. ave.	start	pow(.90)	800 (68.61%)	3071 (73.61%)	3177 (77.89%)
44	ave.	start	pow(.90)	800 (68.61%)	3036 (72.77%)	3157 (77.40%)
45	no home	start	pow(.90)	799 (68.52%)	2967 (71.12%)	3104 (76.10%)
46	adj. ave.	start(.90)		804 (68.95%)	3084 (73.92%)	3177 (77.89%)
47	ave.	start(.90)		787 (67.50%)	3022 (72.44%)	3161 (77.49%)
48	no home	start(.90)		795 (68.18%)	2956 (70.85%)	3086 (75.66%)
49	adj. ave.	start(.90)	exp(.85)	808 (69.30%)	2811 (67.38%)	2962 (72.62%)
50	ave.	start(.90)	exp(.85)	784 (67.24%)	2798 (67.07%)	2952 (72.37%)
51	no home	start(.90)	exp(.85)	778 (66.72%)	2648 (63.47%)	2844 (69.72%)
52	adj. ave.	start(.90)	exp(.90)	794 (68.10%)	2894 (69.37%)	3062 (75.07%)
53	ave.	start(.90)	exp(.90)	775 (66.47%)	2863 (68.62%)	3030 (74.28%)
54	no home	start(.90)	exp(.90)	787 (67.50%)	2735 (65.56%)	2911 (71.37%)
55	adj. ave.	start(.90)	exp(.95)	785 (67.32%)	3034 (72.72%)	3120 (76.49%)
56	ave.	start(.90)	exp(.95)	787 (67.50%)	2958 (70.90%)	3095 (75.88%)

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	Enhancements			FB 1994 *Accuracy #Correct(%)*	MBK 1994-1995 *Accuracy #Correct(%)*	WBK 1994-1995 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	790 (67.75%)	2879 (69.01%)	3019 (74.01%)
58	adj. ave.	start(.90)	pow(.50)	805 (69.04%)	3041 (72.89%)	3166 (77.62%)
59	ave.	start(.90)	pow(.50)	803 (68.87%)	3010 (72.15%)	3142 (77.03%)
60	no home	start(.90)	pow(.50)	819 (70.24%)	2907 (69.68%)	3100 (76.00%)
61	adj. ave.	start(.90)	pow(.75)	785 (67.32%)	3067 (73.51%)	3155 (77.35%)
62	ave.	start(.90)	pow(.75)	801 (68.70%)	3023 (72.46%)	3155 (77.35%)
63	no home	start(.90)	pow(.75)	807 (69.21%)	2937 (70.40%)	3102 (76.05%)
64	adj. ave.	start(.90)	pow(.90)	792 (67.92%)	3091 (74.09%)	3164 (77.57%)
65	ave.	start(.90)	pow(.90)	798 (68.44%)	3026 (72.53%)	3163 (77.54%)
66	no home	start(.90)	pow(.90)	803 (68.87%)	2977 (71.36%)	3098 (75.95%)
67	adj. ave.	start(.95)		805 (69.04%)	3073 (73.66%)	3169 (77.69%)
68	ave.	start(.95)		786 (67.41%)	3035 (72.75%)	3162 (77.52%)
69	no home	start(.95)		806 (69.13%)	2952 (70.76%)	3088 (75.70%)
70	adj. ave.	start(.95)	exp(.85)	803 (68.87%)	2814 (67.45%)	2963 (72.64%)
71	ave.	start(.95)	exp(.85)	784 (67.24%)	2796 (67.02%)	2951 (72.35%)
72	no home	start(.95)	exp(.85)	778 (66.72%)	2648 (63.47%)	2845 (69.75%)
73	adj. ave.	start(.95)	exp(.90)	802 (68.78%)	2888 (69.22%)	3062 (75.07%)
74	ave.	start(.95)	exp(.90)	779 (66.81%)	2859 (68.53%)	3033 (74.36%)

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	Enhancements			FB 1994 *Accuracy* *#Correct(%)*	MBK 1994-1995 *Accuracy* *#Correct(%)*	WBK 1994-1995 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	789 (67.67%)	2733 (65.51%)	2906 (71.24%)
76	adj. ave.	start(.95)	exp(.95)	783 (67.15%)	3037 (72.79%)	3117 (76.42%)
77	ave.	start(.95)	exp(.95)	793 (68.01%)	2959 (70.93%)	3095 (75.88%)
78	no home	start(.95)	exp(.95)	789 (67.67%)	2882 (69.08%)	3014 (73.89%)
79	adj. ave.	start(.95)	pow(.50)	809 (69.38%)	3044 (72.96%)	3156 (77.37%)
80	ave.	start(.95)	pow(.50)	793 (68.01%)	3007 (72.08%)	3137 (76.91%)
81	no home	start(.95)	pow(.50)	819 (70.24%)	2905 (69.63%)	3095 (75.88%)
82	adj. ave.	start(.95)	pow(.75)	799 (68.52%)	3064 (73.44%)	3158 (77.42%)
83	ave.	start(.95)	pow(.75)	800 (68.61%)	3022 (72.44%)	3165 (77.59%)
84	no home	start(.95)	pow(.75)	806 (69.13%)	2936 (70.37%)	3113 (76.32%)
85	adj. ave.	start(.95)	pow(.90)	794 (68.10%)	3079 (73.80%)	3175 (77.84%)
86	ave.	start(.95)	pow(.90)	795 (68.18%)	3026 (72.53%)	3170 (77.72%)
87	no home	start(.95)	pow(.90)	806 (69.13%)	2958 (70.90%)	3096 (75.90%)

Table 44: 1995-1996 Mean Absolute Deviation Results

	Enhancements			FB 1995 *Accuracy* *#Correct(%)*	MBK 1995-1996 *Accuracy* *#Correct(%)*	WBK 1995-1996 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		775 (65.40%)	2939 (69.71%)	3068 (74.45%)
2	ave.	no start		772 (65.15%)	2935 (69.62%)	3032 (73.57%)
3	no home	no start		658 (55.53%)	2579 (61.17%)	2813 (68.26%)
4	adj. ave.	no start	exp(.85)	785 (66.24%)	2752 (65.28%)	2882 (69.93%)
5	ave.	no start	exp(.85)	777 (65.57%)	2747 (65.16%)	2851 (69.18%)
6	no home	no start	exp(.85)	711 (60.00%)	2480 (58.82%)	2608 (63.29%)
7	adj. ave.	no start	exp(.90)	792 (66.84%)	2805 (66.53%)	2910 (70.61%)
8	ave.	no start	exp(.90)	784 (66.16%)	2826 (67.03%)	2917 (70.78%)
9	no home	no start	exp(.90)	707 (59.66%)	2531 (60.03%)	2677 (64.96%)
10	adj. ave.	no start	exp(.95)	795 (67.09%)	2926 (69.40%)	3006 (72.94%)
11	ave.	no start	exp(.95)	781 (65.91%)	2925 (69.38%)	2999 (72.77%)
12	no home	no start	exp(.95)	704 (59.41%)	2606 (61.81%)	2803 (68.02%)
13	adj. ave.	no start	ones	708 (59.75%)	2897 (68.71%)	2923 (70.93%)
14	ave.	no start	ones	708 (59.75%)	2903 (68.86%)	2925 (70.98%)
15	no home	no start	ones	378 (31.90%)	1519 (36.03%)	1647 (39.97%)
16	adj. ave.	no start	pow(.50)	767 (64.73%)	2976 (70.59%)	3015 (73.16%)
17	ave.	no start	pow(.50)	773 (65.23%)	2951 (70.00%)	3010 (73.04%)
18	no home	no start	pow(.50)	665 (56.12%)	2669 (63.31%)	2822 (68.48%)

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	Enhancements			FB 1995 *Accuracy #Correct(%)*	MBK 1995-1996 *Accuracy #Correct(%)*	WBK 1995-1996 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	779 (65.74%)	2969 (70.42%)	3043 (73.84%)
20	ave.	no start	pow(.75)	778 (65.65%)	2935 (69.62%)	3015 (73.16%)
21	no home	no start	pow(.75)	662 (55.86%)	2668 (63.28%)	2853 (69.23%)
22	adj. ave.	no start	pow(.90)	778 (65.65%)	2940 (69.73%)	3063 (74.33%)
23	ave.	no start	pow(.90)	771 (65.06%)	2935 (69.62%)	3021 (73.31%)
24	no home	no start	pow(.90)	657 (55.44%)	2653 (62.93%)	2860 (69.40%)
25	adj. ave.	start		841 (70.97%)	3048 (72.30%)	3200 (77.65%)
26	ave.	start		841 (70.97%)	3033 (71.94%)	3179 (77.14%)
27	no home	start		851 (71.81%)	2889 (68.52%)	3110 (75.47%)
28	adj. ave.	start	exp(.85)	828 (69.87%)	2746 (65.13%)	2928 (71.05%)
29	ave.	start	exp(.85)	812 (68.52%)	2774 (65.80%)	2893 (70.20%)
30	no home	start	exp(.85)	823 (69.45%)	2600 (61.67%)	2751 (66.76%)
31	adj. ave.	start	exp(.90)	825 (69.62%)	2834 (67.22%)	2969 (72.05%)
32	ave.	start	exp(.90)	813 (68.61%)	2855 (67.72%)	2980 (72.31%)
33	no home	start	exp(.90)	823 (69.45%)	2672 (63.38%)	2820 (68.43%)
34	adj. ave.	start	exp(.95)	832 (70.21%)	2970 (70.45%)	3085 (74.86%)
35	ave.	start	exp(.95)	817 (68.95%)	2977 (70.61%)	3081 (74.76%)
36	no home	start	exp(.95)	836 (70.55%)	2772 (65.75%)	2990 (72.56%)
37	adj. ave.	start	pow(.50)	850 (71.73%)	3053 (72.41%)	3164 (76.78%)

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	Enhancements			FB 1995 *Accuracy #Correct(%)*	MBK 1995-1996 *Accuracy #Correct(%)*	WBK 1995-1996 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	844 (71.22%)	3046 (72.25%)	3163 (76.75%)
39	no home	start	pow(.50)	859 (72.49%)	2886 (68.45%)	3081 (74.76%)
40	adj. ave.	start	pow(.75)	851 (71.81%)	3037 (72.04%)	3202 (77.70%)
41	ave.	start	pow(.75)	846 (71.39%)	3040 (72.11%)	3179 (77.14%)
42	no home	start	pow(.75)	854 (72.07%)	2879 (68.29%)	3112 (75.52%)
43	adj. ave.	start	pow(.90)	836 (70.55%)	3041 (72.13%)	3200 (77.65%)
44	ave.	start	pow(.90)	836 (70.55%)	3013 (71.47%)	3183 (77.24%)
45	no home	start	pow(.90)	841 (70.97%)	2902 (68.83%)	3126 (75.86%)
46	adj. ave.	start(.90)		843 (71.14%)	3044 (72.20%)	3198 (77.60%)
47	ave.	start(.90)		842 (71.05%)	3022 (71.68%)	3169 (76.90%)
48	no home	start(.90)		847 (71.48%)	2882 (68.36%)	3105 (75.35%)
49	adj. ave.	start(.90)	exp(.85)	828 (69.87%)	2742 (65.04%)	2927 (71.03%)
50	ave.	start(.90)	exp(.85)	812 (68.52%)	2773 (65.77%)	2891 (70.15%)
51	no home	start(.90)	exp(.85)	830 (70.04%)	2599 (61.65%)	2752 (66.78%)
52	adj. ave.	start(.90)	exp(.90)	825 (69.62%)	2831 (67.15%)	2974 (72.17%)
53	ave.	start(.90)	exp(.90)	815 (68.78%)	2851 (67.62%)	2967 (72.00%)
54	no home	start(.90)	exp(.90)	829 (69.96%)	2673 (63.40%)	2827 (68.60%)
55	adj. ave.	start(.90)	exp(.95)	824 (69.54%)	2971 (70.47%)	3090 (74.98%)
56	ave.	start(.90)	exp(.95)	818 (69.03%)	2972 (70.49%)	3090 (74.98%)

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	Enhancements			FB 1995 *Accuracy #Correct(%)*	MBK 1995-1996 *Accuracy #Correct(%)*	WBK 1995-1996 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	834 (70.38%)	2775 (65.82%)	2988 (72.51%)
58	adj. ave.	start(.90)	pow(.50)	849 (71.65%)	3072 (72.87%)	3160 (76.68%)
59	ave.	start(.90)	pow(.50)	843 (71.14%)	3041 (72.13%)	3154 (76.53%)
60	no home	start(.90)	pow(.50)	859 (72.49%)	2918 (69.21%)	3078 (74.69%)
61	adj. ave.	start(.90)	pow(.75)	847 (71.48%)	3048 (72.30%)	3207 (77.82%)
62	ave.	start(.90)	pow(.75)	834 (70.38%)	3032 (71.92%)	3173 (77.00%)
63	no home	start(.90)	pow(.75)	841 (70.97%)	2890 (68.55%)	3103 (75.30%)
64	adj. ave.	start(.90)	pow(.90)	845 (71.31%)	3048 (72.30%)	3200 (77.65%)
65	ave.	start(.90)	pow(.90)	838 (70.72%)	3015 (71.51%)	3177 (77.09%)
66	no home	start(.90)	pow(.90)	853 (71.98%)	2908 (68.98%)	3106 (75.37%)
67	adj. ave.	start(.95)		845 (71.31%)	3048 (72.30%)	3199 (77.63%)
68	ave.	start(.95)		850 (71.73%)	3026 (71.77%)	3173 (77.00%)
69	no home	start(.95)		847 (71.48%)	2901 (68.81%)	3106 (75.37%)
70	adj. ave.	start(.95)	exp(.85)	829 (69.96%)	2747 (65.16%)	2927 (71.03%)
71	ave.	start(.95)	exp(.85)	817 (68.95%)	2774 (65.80%)	2892 (70.18%)
72	no home	start(.95)	exp(.85)	826 (69.70%)	2601 (61.69%)	2752 (66.78%)
73	adj. ave.	start(.95)	exp(.90)	828 (69.87%)	2834 (67.22%)	2973 (72.14%)
74	ave.	start(.95)	exp(.90)	817 (68.95%)	2851 (67.62%)	2974 (72.17%)

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	Enhancements			FB 1995 *Accuracy* *#Correct(%)*	MBK 1995-1996 *Accuracy* *#Correct(%)*	WBK 1995-1996 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	824 (69.54%)	2674 (63.43%)	2824 (68.53%)
76	adj. ave.	start(.95)	exp(.95)	826 (69.70%)	2962 (70.26%)	3085 (74.86%)
77	ave.	start(.95)	exp(.95)	816 (68.86%)	2971 (70.47%)	3088 (74.93%)
78	no home	start(.95)	exp(.95)	837 (70.63%)	2773 (65.77%)	2988 (72.51%)
79	adj. ave.	start(.95)	pow(.50)	854 (72.07%)	3045 (72.22%)	3159 (76.66%)
80	ave.	start(.95)	pow(.50)	850 (71.73%)	3037 (72.04%)	3161 (76.70%)
81	no home	start(.95)	pow(.50)	854 (72.07%)	2909 (69.00%)	3077 (74.67%)
82	adj. ave.	start(.95)	pow(.75)	850 (71.73%)	3032 (71.92%)	3193 (77.48%)
83	ave.	start(.95)	pow(.75)	839 (70.80%)	3038 (72.06%)	3170 (76.92%)
84	no home	start(.95)	pow(.75)	853 (71.98%)	2880 (68.31%)	3113 (75.54%)
85	adj. ave.	start(.95)	pow(.90)	840 (70.89%)	3058 (72.53%)	3203 (77.72%)
86	ave.	start(.95)	pow(.90)	836 (70.55%)	3013 (71.47%)	3169 (76.90%)
87	no home	start(.95)	pow(.90)	842 (71.05%)	2909 (69.00%)	3117 (75.64%)

Table 45: 1996-1997 Mean Absolute Deviation Results

	Enhancements			FB 1996 *Accuracy* *#Correct(%)*	MBK 1996-1997 *Accuracy* *#Correct(%)*	WBK 1996-1997 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
1	adj. ave.	no start		812 (67.72%)	3076 (71.99%)	3076 (74.26%)
2	ave.	no start		809 (67.47%)	3060 (71.61%)	3078 (74.31%)
3	no home	no start		668 (55.71%)	2673 (62.56%)	2802 (67.65%)
4	adj. ave.	no start	exp(.85)	794 (66.22%)	2837 (66.39%)	2926 (70.64%)
5	ave.	no start	exp(.85)	802 (66.89%)	2885 (67.52%)	2931 (70.76%)
6	no home	no start	exp(.85)	711 (59.30%)	2527 (59.14%)	2690 (64.94%)
7	adj. ave.	no start	exp(.90)	821 (68.47%)	2933 (68.64%)	3020 (72.91%)
8	ave.	no start	exp(.90)	827 (68.97%)	2947 (68.97%)	3006 (72.57%)
9	no home	no start	exp(.90)	730 (60.88%)	2597 (60.78%)	2790 (67.36%)
10	adj. ave.	no start	exp(.95)	838 (69.89%)	3044 (71.24%)	3075 (74.24%)
11	ave.	no start	exp(.95)	836 (69.72%)	3024 (70.77%)	3061 (73.90%)
12	no home	no start	exp(.95)	702 (58.55%)	2673 (62.56%)	2855 (68.93%)
13	adj. ave.	no start	ones	758 (63.22%)	2942 (68.85%)	2966 (71.61%)
14	ave.	no start	ones	755 (62.97%)	2956 (69.18%)	2960 (71.46%)
15	no home	no start	ones	382 (31.86%)	1512 (35.38%)	1658 (40.03%)
16	adj. ave.	no start	pow(.50)	792 (66.06%)	3039 (71.12%)	3084 (74.46%)
17	ave.	no start	pow(.50)	800 (66.72%)	3050 (71.38%)	3077 (74.29%)
18	no home	no start	pow(.50)	670 (55.88%)	2725 (63.77%)	2835 (68.45%)

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	Enhancements			FB 1996 *Accuracy* *#Correct(%)*	MBK 1996-1997 *Accuracy* *#Correct(%)*	WBK 1996-1997 *Accuracy* *#Correct(%)*
	Home	*Start*	*Other*			
19	adj. ave.	no start	pow(.75)	805 (67.14%)	3089 (72.29%)	3057 (73.80%)
20	ave.	no start	pow(.75)	807 (67.31%)	3067 (71.78%)	3073 (74.19%)
21	no home	no start	pow(.75)	668 (55.71%)	2733 (63.96%)	2835 (68.45%)
22	adj. ave.	no start	pow(.90)	821 (68.47%)	3069 (71.82%)	3085 (74.48%)
23	ave.	no start	pow(.90)	817 (68.14%)	3065 (71.73%)	3075 (74.24%)
24	no home	no start	pow(.90)	664 (55.38%)	2732 (63.94%)	2839 (68.54%)
25	adj. ave.	start		871 (72.64%)	3149 (73.70%)	3202 (77.31%)
26	ave.	start		859 (71.64%)	3132 (73.30%)	3189 (76.99%)
27	no home	start		852 (71.06%)	2944 (68.90%)	3130 (75.57%)
28	adj. ave.	start	exp(.85)	818 (68.22%)	2837 (66.39%)	2960 (71.46%)
29	ave.	start	exp(.85)	824 (68.72%)	2888 (67.59%)	2959 (71.44%)
30	no home	start	exp(.85)	799 (66.64%)	2647 (61.95%)	2816 (67.99%)
31	adj. ave.	start	exp(.90)	843 (70.31%)	2922 (68.38%)	3058 (73.83%)
32	ave.	start	exp(.90)	848 (70.73%)	2969 (69.48%)	3039 (73.37%)
33	no home	start	exp(.90)	819 (68.31%)	2735 (64.01%)	2928 (70.69%)
34	adj. ave.	start	exp(.95)	871 (72.64%)	3060 (71.61%)	3137 (75.74%)
35	ave.	start	exp(.95)	866 (72.23%)	3056 (71.52%)	3128 (75.52%)
36	no home	start	exp(.95)	831 (69.31%)	2860 (66.93%)	3028 (73.10%)
37	adj. ave.	start	pow(.50)	860 (71.73%)	3124 (73.11%)	3190 (77.02%)

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	Enhancements			FB 1996 *Accuracy #Correct(%)*	MBK 1996-1997 *Accuracy #Correct(%)*	WBK 1996-1997 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
38	ave.	start	pow(.50)	865 (72.14%)	3116 (72.92%)	3193 (77.09%)
39	no home	start	pow(.50)	841 (70.14%)	2965 (69.39%)	3125 (75.45%)
40	adj. ave.	start	pow(.75)	867 (72.31%)	3132 (73.30%)	3199 (77.23%)
41	ave.	start	pow(.75)	858 (71.56%)	3135 (73.37%)	3195 (77.14%)
42	no home	start	pow(.75)	862 (71.89%)	2966 (69.41%)	3115 (75.21%)
43	adj. ave.	start	pow(.90)	875 (72.98%)	3138 (73.44%)	3203 (77.33%)
44	ave.	start	pow(.90)	860 (71.73%)	3151 (73.74%)	3193 (77.09%)
45	no home	start	pow(.90)	854 (71.23%)	2959 (69.25%)	3117 (75.25%)
46	adj. ave.	start(.90)		868 (72.39%)	3160 (73.95%)	3195 (77.14%)
47	ave.	start(.90)		857 (71.48%)	3129 (73.23%)	3179 (76.75%)
48	no home	start(.90)		847 (70.64%)	2951 (69.06%)	3129 (75.54%)
49	adj. ave.	start(.90)	exp(.85)	829 (69.14%)	2842 (66.51%)	2961 (71.49%)
50	ave.	start(.90)	exp(.85)	829 (69.14%)	2889 (67.61%)	2953 (71.29%)
51	no home	start(.90)	exp(.85)	803 (66.97%)	2651 (62.04%)	2820 (68.08%)
52	adj. ave.	start(.90)	exp(.90)	851 (70.98%)	2918 (68.29%)	3061 (73.90%)
53	ave.	start(.90)	exp(.90)	849 (70.81%)	2974 (69.60%)	3037 (73.32%)
54	no home	start(.90)	exp(.90)	828 (69.06%)	2737 (64.05%)	2921 (70.52%)
55	adj. ave.	start(.90)	exp(.95)	861 (71.81%)	3060 (71.61%)	3142 (75.86%)
56	ave.	start(.90)	exp(.95)	862 (71.89%)	3065 (71.73%)	3128 (75.52%)

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	Enhancements			FB 1996 *Accuracy #Correct(%)*	MBK 1996-1997 *Accuracy #Correct(%)*	WBK 1996-1997 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
57	no home	start(.90)	exp(.95)	835 (69.64%)	2852 (66.74%)	3024 (73.01%)
58	adj. ave.	start(.90)	pow(.50)	865 (72.14%)	3131 (73.27%)	3183 (76.85%)
59	ave.	start(.90)	pow(.50)	862 (71.89%)	3117 (72.95%)	3192 (77.06%)
60	no home	start(.90)	pow(.50)	856 (71.39%)	2956 (69.18%)	3110 (75.08%)
61	adj. ave.	start(.90)	pow(.75)	869 (72.48%)	3146 (73.63%)	3190 (77.02%)
62	ave.	start(.90)	pow(.75)	857 (71.48%)	3140 (73.48%)	3189 (76.99%)
63	no home	start(.90)	pow(.75)	852 (71.06%)	2960 (69.27%)	3119 (75.30%)
64	adj. ave.	start(.90)	pow(.90)	866 (72.23%)	3150 (73.72%)	3201 (77.28%)
65	ave.	start(.90)	pow(.90)	861 (71.81%)	3150 (73.72%)	3191 (77.04%)
66	no home	start(.90)	pow(.90)	847 (70.64%)	2946 (68.94%)	3103 (74.92%)
67	adj. ave.	start(.95)		873 (72.81%)	3152 (73.77%)	3194 (77.11%)
68	ave.	start(.95)		861 (71.81%)	3127 (73.18%)	3189 (76.99%)
69	no home	start(.95)		852 (71.06%)	2941 (68.83%)	3129 (75.54%)
70	adj. ave.	start(.95)	exp(.85)	828 (69.06%)	2838 (66.42%)	2964 (71.56%)
71	ave.	start(.95)	exp(.85)	825 (68.81%)	2886 (67.54%)	2957 (71.39%)
72	no home	start(.95)	exp(.85)	799 (66.64%)	2649 (61.99%)	2819 (68.06%)
73	adj. ave.	start(.95)	exp(.90)	845 (70.48%)	2915 (68.22%)	3056 (73.78%)
74	ave.	start(.95)	exp(.90)	850 (70.89%)	2969 (69.48%)	3038 (73.35%)

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	Enhancements			FB 1996 *Accuracy #Correct(%)*	MBK 1996-1997 *Accuracy #Correct(%)*	WBK 1996-1997 *Accuracy #Correct(%)*
	Home	*Start*	*Other*			
75	no home	start(.95)	exp(.90)	825 (68.81%)	2740 (64.12%)	2925 (70.62%)
76	adj. ave.	start(.95)	exp(.95)	864 (72.06%)	3070 (71.85%)	3148 (76.00%)
77	ave.	start(.95)	exp(.95)	860 (71.73%)	3061 (71.64%)	3128 (75.52%)
78	no home	start(.95)	exp(.95)	835 (69.64%)	2857 (66.86%)	3026 (73.06%)
79	adj. ave.	start(.95)	pow(.50)	858 (71.56%)	3127 (73.18%)	3196 (77.16%)
80	ave.	start(.95)	pow(.50)	860 (71.73%)	3113 (72.85%)	3194 (77.11%)
81	no home	start(.95)	pow(.50)	845 (70.48%)	2964 (69.37%)	3109 (75.06%)
82	adj. ave.	start(.95)	pow(.75)	861 (71.81%)	3136 (73.39%)	3203 (77.33%)
83	ave.	start(.95)	pow(.75)	859 (71.64%)	3157 (73.88%)	3193 (77.09%)
84	no home	start(.95)	pow(.75)	852 (71.06%)	2957 (69.20%)	3119 (75.30%)
85	adj. ave.	start(.95)	pow(.90)	867 (72.31%)	3145 (73.60%)	3197 (77.18%)
86	ave.	start(.95)	pow(.90)	862 (71.89%)	3151 (73.74%)	3186 (76.92%)
87	no home	start(.95)	pow(.90)	846 (70.56%)	2965 (69.39%)	3120 (75.33%)

Appendix C. Yearly Final Ratings of Best Method per Sport

Table 46: 1988-1989 Final Ratings

	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Florida St.	141.86	Arizona	127.19	Tennessee	118.04
2	Miami (Fla.)	141.63	Michigan	126.45	Louisiana Tech	116.08
3	Notre Dame	138.26	Illinois	124.14	Auburn	115.56
4	West Virginia	133.68	Duke	123.64	Maryland	115.26
5	Southern Cal	133.57	Seton Hall	122.11	Stanford	114.13
6	Auburn	132.98	Syracuse	122.07	Long Beach St.	113.67
7	Michigan	132.27	North Carolina	121.60	Texas	113.02
8	UCLA	130.53	Oklahoma	121.54	Iowa	111.97
9	Clemson	130.31	Georgetown	120.67	Georgia	111.49
10	Houston	129.78	Missouri	120.58	N. Carolina St.	111.09
11	Nebraska	129.63	Indiana	120.00	Colorado	110.60
12	Oklahoma St.	127.51	Arkansas	118.54	Ohio St.	110.57
13	Syracuse	127.36	Iowa	118.00	Mississippi	110.53
14	Oklahoma	126.56	Stanford	117.54	Clemson	110.35
15	Arkansas	124.91	Purdue	116.82	Rutgers	110.28
16	Georgia	124.77	Providence	116.35	South Carolina	110.23
17	Michigan St.	124.71	UNLV	115.86	Purdue	110.22
18	Pittsburgh	124.07	Louisville	115.73	UNLV	109.91
19	Alabama	123.13	N. Carolina St.	115.66	Stephen F. Austin	109.67
20	Indiana	122.87	Oregon St.	115.31	LSU	109.38

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
21	Washington St.	122.45	Virginia	115.09	Washington	109.24
22	Wyoming	121.09	South Alabama	114.67	Virginia	108.77
23	N. Carolina St.	120.62	Minnesota	114.31	W. Kentucky	108.60
24	LSU	120.60	Kansas	113.61	James Madison	108.13
25	Arizona	120.50	St. Mary's (Cal.)	113.58	Vanderbilt	108.12
26	Colorado	118.74	UTEP	113.44	Old Dominion	107.88
27	Penn St.	118.73	Ohio St.	113.35	San Diego St.	107.84
28	Texas A&M	118.43	UCLA	113.25	Hawaii	107.68
29	Florida	117.01	Kansas St.	113.22	St. Joseph's (Pa.)	107.51
30	Stanford	116.80	Connecticut	113.22	Illinois St.	107.46
31	Washington	116.70	Wisconsin	112.98	Bowling Green	107.41
32	Iowa	116.61	Georgia Tech	112.89	Wake Forest	107.34
33	Southern Miss.	115.98	Florida St.	112.59	Southern Miss.	107.10
34	Brigham Young	114.68	Evansville	112.37	NE. Louisiana	107.07
35	Georgia Southern	114.26	Oklahoma St.	112.09	Montana	107.04
36	South Carolina	114.18	Pittsburgh	112.01	Oklahoma St.	107.04
37	Wake Forest	113.70	Memphis	111.74	Utah	106.74
38	Virginia	113.33	Michigan St.	111.32	Arkansas	106.72
39	Kentucky	113.24	Clemson	111.19	Temple	106.62
40	Texas Tech	113.10	Notre Dame	111.11	Oregon	106.50
41	Rutgers	112.79	Iowa St.	111.10	Connecticut	106.31

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
42	Army	112.58	West Virginia	111.03	Cal St.-Fullerton	106.21
43	Maryland	112.32	Vanderbilt	110.97	Indiana	106.04
44	Oregon St.	111.79	La Salle	110.71	Houston	105.72
45	Furman	111.60	St. John's	110.71	Cincinnati	105.61
46	Mississippi	111.43	New Mexico	110.59	Tennessee Tech	105.59
47	Oregon	111.24	Alabama	110.15	Texas Tech	105.55
48	Tennessee	111.18	California	109.91	Northwestern St.	105.52
49	East Carolina	111.04	Akron	109.88	Texas A&M	105.50
50	Ohio St.	110.98	DePaul	109.88	N. Illinois	105.49
51	Georgia Tech	110.86	Idaho	109.82	La Salle	105.40
52	California	110.78	St. Louis	109.82	Fresno St.	105.28
53	Hawaii	110.71	Villanova	109.77	Penn St.	105.26
54	Illinois	110.63	Ball St.	109.51	Michigan St.	105.18
55	Duke	110.54	Colorado St.	109.31	West Virginia	105.04
56	UTEP	110.49	Siena	108.76	Middle Tenn. St.	104.98
57	Memphis	110.20	Texas	108.59	Radford	104.89
58	Fresno St.	110.01	Xavier (Ohio)	108.28	Alabama	104.86
59	Virginia Tech	108.83	Tennessee	108.26	Duke	104.80
60	Air Force	108.37	Temple	108.22	Missouri	104.77
61	North Texas	108.30	Ark.-Little Rock	108.14	Nebraska	104.57
62	Louisville	108.03	Wichita St.	107.86	S. Illinois	104.57

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
63	SW Louisiana	107.55	Loyola Marymount	107.59	Providence	104.56
64	Baylor	107.39	Ala.-Birmingham	107.38	Virginia Tech	104.50
65	Boston College	107.00	Kent	107.29	Kansas St.	104.46
66	Texas	106.98	Wake Forest	106.87	Southern Cal	104.34
67	Marshall	106.88	Louisiana Tech	106.67	Murray St.	104.30
68	Arizona St.	106.77	LSU	106.55	UCLA	104.22
69	Vanderbilt	106.27	Hawaii	106.54	St. Peter's	104.19
70	Appalachian St.	105.89	Florida	106.50	Florida St.	104.18
71	Holy Cross	105.87	South Carolina	106.49	DePaul	104.14
72	E. Kentucky	105.80	SW Missouri St.	106.49	Richmond	104.12
73	Missouri	105.74	UC Santa Barbara	106.43	Miami (Fla.)	104.04
74	Stephen F. Austin	105.34	Middle Tenn. St.	106.43	Lamar	104.01
75	Texas Christian	104.46	Penn St.	106.29	Holy Cross	103.93
76	Utah	104.14	Nebraska	105.96	Villanova	103.84
77	Navy	103.96	Arkansas St.	105.89	New Orleans	103.83
78	Middle Tenn. St.	103.90	Cincinnati	105.73	California	103.63
79	Tulsa	103.09	N.C. Charlotte	105.48	Georgia Tech	103.61
80	Temple	102.96	Brigham Young	105.47	Oklahoma	103.60
81	North Carolina	102.85	Texas A&M	105.36	North Carolina	103.54
82	Minnesota	102.66	Georgia	105.16	South Alabama	103.53
83	Cent. Michigan	102.36	Boston College	104.80	Oregon St.	103.44

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
84	Tulane	101.83	New Mexico St.	104.75	Seton Hall	103.42
85	Iowa St.	101.76	New Orleans	104.75	Northwestern	103.39
86	Northwestern St.	101.75	Southern Cal	104.75	Illinois	103.33
87	W. Michigan	101.56	Wyoming	104.72	Boston College	103.29
88	Ball St.	101.34	Utah	104.68	Kentucky	103.15
89	Maine	100.32	Old Dominion	104.59	Kansas	103.10
90	Delaware	100.31	Boise St.	104.39	Syracuse	103.07
91	Lafayette	100.03	Cleveland St.	104.30	Iowa St.	102.98
92	Citadel	99.75	Northwestern	104.22	Drake	102.76
93	Mississippi St.	99.49	Washington St.	104.17	E. Illinois	102.63
94	Massachusetts	99.22	Maryland	103.97	Washington St.	102.58
95	Connecticut	99.09	Mississippi	103.81	Southern Meth.	102.42
96	Arkansas St.	99.02	Texas Tech	103.75	Michigan	102.40
97	Rice	98.75	Creighton	103.70	Notre Dame	102.36
98	Tn.-Chattanooga	98.73	Richmond	103.63	Appalachian St.	102.31
99	Cal St.-Fullerton	98.72	Santa Clara	103.62	Florida	102.18
100	William & Mary	98.37	Pepperdine	103.42	Morehead St.	102.17
101	New Hampshire	98.31	Rutgers	103.29	Virginia Commonwealth	102.02
102	Northwestern	97.95	Fresno St.	103.28	Dartmouth	101.96
103	Cornell	97.61	Air Force	103.28	Toledo	101.84
104	Akron	97.20	Houston	103.16	Wisconsin	101.78

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
105	Pennsylvania	97.16	Boston U.	103.14	Florida Int'l	101.75
106	Liberty	96.97	Utah St.	103.13	Grambling	101.72
107	James Madison	96.67	Kentucky	102.96	Minnesota	101.67
108	San Jose St.	96.53	Virginia Commonwealth	102.89	Loyola (Ill.)	101.47
109	W. Kentucky	95.45	Virginia Tech	102.80	Rice	101.46
110	Jackson St.	95.41	Washington	102.49	Wis.-Green Bay	101.45
111	Idaho	95.17	Bradley	102.26	Indiana St.	101.44
112	N. Illinois	94.90	Colorado	101.95	Weber St.	101.41
113	Louisiana Tech	94.71	Murray St.	101.77	New Mexico St.	101.35
114	Kent	94.50	Mississippi St.	101.77	St. John's	101.27
115	Grambling	94.00	Cal St.-Fullerton	101.77	North Texas	101.27
116	E. Michigan	94.00	Miami (Fla.)	101.62	Arizona	101.23
117	Toledo	93.98	E. Michigan	101.35	Arizona St.	101.22
118	Villanova	93.96	Southern Miss.	101.33	Tulane	101.15
119	Lehigh	93.95	Gonzaga	101.17	Miami (Ohio)	101.08
120	Purdue	93.62	Towson St.	101.13	Miss. Valley St.	101.07
121	Nevada	93.56	Stetson	101.08	Stetson	100.91
122	Towson St.	93.52	E. Tennessee St.	100.98	St. Mary's (Cal.)	100.89
123	Princeton	93.48	Arizona St.	100.97	SW Texas St.	100.83
124	W. Illinois	93.27	Texas Christian	100.94	George Mason	100.78
125	Montana	93.23	Marquette	100.87	South Florida	100.78

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
126	McNeese St.	92.92	Georgia Southern	100.79	George Washington	100.77
127	NE. Louisiana	92.80	Southern Meth.	100.78	Memphis	100.74
128	Wisconsin	92.77	Miami (Ohio)	100.73	Tn.-Chattanooga	100.70
129	Florida A&M	92.32	Oregon	100.67	Boise St.	100.55
130	San Diego St.	92.10	Southern	100.65	Mississippi St.	100.53
131	SW Missouri St.	91.16	Austin Peay	100.64	East Carolina	100.49
132	Colorado St.	90.92	Montana	100.40	Sam Houston St.	100.44
133	Lamar	90.79	E. Illinois	100.15	Montana St.	100.35
134	Cincinnati	90.71	Ill.-Chicago	100.13	Idaho	100.24
135	Northeastern	90.04	Tulsa	100.12	McNeese St.	100.18
136	Nicholls St.	90.03	Dayton	100.03	Pittsburgh	100.17
137	Murray St.	89.69	W. Kentucky	99.94	Wyoming	100.13
138	Boston U.	89.51	George Mason	99.94	SE Louisiana	100.10
139	Weber St.	88.95	Tn.-Chattanooga	99.92	Georgia Southern	99.95
140	W. Carolina	88.24	SW Louisiana	99.91	Maine	99.88
141	N. Arizona	88.03	Long Beach St.	99.76	Marshall	99.88
142	Howard	88.00	S. Illinois	99.74	Alcorn St.	99.67
143	Dartmouth	87.84	Drake	99.64	Texas Christian	99.66
144	N. Iowa	87.80	Wis.-Green Bay	99.37	Arkansas St.	99.64
145	Alabama St.	87.54	Butler	99.28	Colorado St.	99.38
146	Boise St.	87.52	San Diego St.	99.21	Fordham	99.34

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
147	SW Texas St.	87.14	San Francisco	99.19	Louisville	99.30
148	Colgate	87.01	Appalachian St.	99.19	Loyola Marymount	99.25
149	Alcorn St.	86.81	Loyola (Ill.)	99.09	Alabama St.	99.24
150	Ohio U.	86.71	Oral Roberts	99.04	Howard	99.23
151	Delaware St.	86.46	Jacksonville	99.03	Cent. Michigan	99.22
152	Youngstown St.	86.44	UC Irvine	99.01	Gonzaga	99.08
153	Richmond	86.35	St. Peter's	98.86	Pacific	99.08
154	Bethune-Cookman	86.16	Rhode Island	98.85	Delaware	99.01
155	Rhode Island	85.99	Fordham	98.76	Ball St.	98.92
156	E. Illinois	85.95	Nevada	98.64	Fairfield	98.91
157	Utah St.	85.67	Citadel	98.48	Bradley	98.86
158	S. Illinois	85.49	Princeton	98.45	Lafayette	98.83
159	Kansas St.	84.51	N. Iowa	98.33	Portland St.	98.73
160	Va. Military	84.34	McNeese St.	98.05	Boston U.	98.73
161	Indiana St.	84.30	Illinois St.	98.02	U.S. Int'l	98.70
162	Bucknell	84.14	Marshall	98.00	N.C. Charlotte	98.68
163	Long Beach St.	83.54	James Madison	97.88	UC Irvine	98.60
164	Harvard	83.46	Auburn	97.88	UC Santa Barbara	98.56
165	Yale	83.45	N.C.-Wilmington	97.70	Evansville	98.52
166	UNLV	83.36	Duquesne	97.51	E. Kentucky	98.44
167	Bowling Green	83.36	Ohio U.	97.45	Georgetown	98.43

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
168	Kansas	83.00	Bucknell	97.40	Brigham Young	98.35
169	Tennessee St.	82.96	Texas-Pan American	97.21	Siena	98.19
170	Southern	82.92	Toledo	97.21	Furman	98.07
171	Pacific	82.20	Weber St.	97.11	Dayton	98.00
172	Sam Houston St.	81.70	Iona	96.76	W. Illinois	97.97
173	Miami (Ohio)	81.52	American U.	96.70	Florida A&M	97.97
174	Montana St.	80.93	Lamar	96.53	Duquesne	97.89
175	Morehead St.	79.73	Rice	96.35	Mercer	97.83
176	Illinois St.	78.73	Bowling Green	96.26	Wichita St.	97.79
177	E. Tennessee St.	78.71	Cent. Michigan	96.03	Harvard	97.78
178	S. Carolina St.	77.34	Northeastern	96.00	Mount St. Mary's (Md.)	97.77
179	Tennessee Tech	76.45	Texas-San Antonio	95.97	Massachusetts	97.73
180	E. Washington	75.80	South Florida	95.95	N. Arizona	97.62
181	New Mexico	75.25	Pacific	95.87	Northeastern	97.48
182	Brown	75.04	Furman	95.81	W. Michigan	97.48
183	Columbia	74.29	Sam Houston St.	95.19	Detroit	97.47
184	Prairie View A&M	73.93	S. Carolina St.	95.14	Creighton	97.40
185	New Mexico St.	73.45	W. Michigan	94.73	Yale	97.39
186	Davidson	70.67	Montana St.	94.71	Pepperdine	97.33
187	Texas Southern	67.64	North Texas	94.63	E. Michigan	97.32
188	Miss. Valley St.	66.85	Texas Southern	94.37	Texas-Arlington	97.29

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
189	Austin Peay	66.22	Detroit	94.29	Brown	97.27
190	Idaho St.	64.96	Va. Military	94.25	SW Missouri St.	97.24
191	N. Carolina A&T	61.99	East Carolina	94.21	Manhattan	97.12
192	Morgan St.	61.03	San Diego	94.20	New Hampshire	97.08
193			Hartford	94.20	San Diego	97.05
194			Grambling	94.00	UTEP	97.03
195			Dartmouth	93.84	Texas-San Antonio	96.98
196			NE. Louisiana	93.63	Xavier (Ohio)	96.91
197			W. Carolina	93.59	Akron	96.84
198			Holy Cross	93.58	Campbell	96.77
199			Valparaiso	93.26	N. Iowa	96.70
200			Coppin St.	93.22	Ala.-Birmingham	96.66
201			Northwestern St.	93.08	Ohio U.	96.65
202			Lafayette	93.06	Jackson St.	96.60
203			SW Texas St.	92.86	Bucknell	96.47
204			E. Washington	92.80	Georgia St.	96.43
205			Centenary (La.)	92.49	St. Bonaventure	96.42
206			Delaware	92.45	Kent	96.35
207			Wright St.	92.31	N.C.-Wilmington	96.31
208			Florida A&M	92.20	Texas Southern	96.19
209			Hofstra	92.18	Marquette	96.12

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
210			Indiana St.	92.03	San Francisco	96.03
211			N.C.-Asheville	91.90	Hofstra	95.97
212			Army	91.82	Youngstown St.	95.90
213			San Jose St.	91.68	Canisius	95.88
214			Mercer	91.67	Princeton	95.78
215			Campbell	91.61	San Jose St.	95.75
216			St. Joseph's (Pa.)	91.44	Bethune-Cookman	95.65
217			Drexel	91.42	Iona	95.64
218			Mount St. Mary's (Md.)	91.29	Cent. Florida	95.61
219			Fairleigh Dickinson	91.07	N. Carolina A&T	95.56
220			Coastal Carolina	91.01	Southern	95.54
221			Canisius	90.98	Mississippi Col.	95.53
222			Georgia St.	90.93	E. Washington	95.50
223			Samford	90.92	Baylor	95.48
224			Robert Morris	90.67	Butler	95.44
225			Texas-Arlington	90.62	Towson St.	95.43
226			Morehead St.	90.47	Wagner College	95.38
227			Lehigh	90.40	W. Carolina	95.31
228			Marist	90.31	Drexel	95.10
229			Tennessee Tech	90.27	E. Tennessee St.	95.06
230			Chicago St.	90.25	Idaho St.	94.82

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
231			Pennsylvania	90.16	Santa Clara	94.74
232			Stephen F. Austin	90.15	Wright St.	94.63
233			Alabama St.	90.15	Columbia	94.59
234			Baylor	90.08	Delaware St.	94.59
235			Houston Baptist	89.97	Rhode Island	94.45
236			Fairfield	89.76	Oral Roberts	94.32
237			Morgan St.	89.73	Portland	94.31
238			Navy	89.71	SW Louisiana	94.21
239			Jackson St.	89.57	Augusta St.	93.98
240			Southern Utah	89.47	Pennsylvania	93.88
241			N. Illinois	89.43	Austin Peay	93.85
242			U.S. Int'l	89.35	American U.	93.79
243			Miss. Valley St.	89.31	Southern Utah	93.71
244			Maine	89.09	Prairie View A&M	93.65
245			Massachusetts	89.01	Cent. Connecticut St.	93.57
246			Monmouth (N.J.)	88.96	Colgate	93.49
247			Yale	88.77	Lehigh	93.48
248			Winthrop	88.43	Liberty	93.38
249			St. Bonaventure	88.30	Ill.-Chicago	93.21
250			Idaho St.	88.17	Winthrop	93.17
251			Niagara	88.16	Robert Morris	92.92

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
252			W. Illinois	88.13	Monmouth (N.J.)	92.88
253			Manhattan	87.89	St. Louis	92.76
254			Md.-Baltimore County	87.78	Coastal Carolina	92.56
255			Florida Int'l	87.71	William & Mary	92.54
256			Charleston Southern	87.65	Nevada	92.51
257			Bethune-Cookman	87.13	S. Carolina St.	92.10
258			Harvard	86.87	Vermont	91.98
259			N. Carolina A&T	86.87	Nicholls St.	91.93
260			Portland	86.57	Niagara	91.83
261			Cornell	86.55	Cornell	91.65
262			George Washington	86.24	Valparaiso	91.60
263			Davidson	85.89	Hartford	91.59
264			E. Kentucky	85.89	Fairleigh Dickinson	91.54
265			Hardin-Simmons	85.69	Md.-Baltimore County	91.37
266			Tennessee St.	85.36	Morgan St.	91.36
267			William & Mary	85.16	Marist	91.18
268			New Hampshire	85.08	Cleveland St.	90.92
269			Liberty	84.76	N.C.-Asheville	90.79
270			Colgate	84.20	Coppin St.	90.03
271			St. Francis (Pa.)	84.15	Rider	89.61
272			Nicholls St.	84.05	Tennessee St.	89.51

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	FB 1988		MBK 1988-1989		WBK 1988-1989	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
273			Long Island U.	83.92	Loyola (Md.)	88.73
274			Radford	83.76	Chicago St.	87.90
275			Prairie View A&M	83.44	St. Francis (Pa.)	87.18
276			Vermont	83.42	Long Island U.	86.79
277			Howard	83.25	Charleston Southern	86.71
278			Cent. Florida	83.17	Texas-Pan American	84.95
279			Youngstown St.	82.90	Brooklyn	84.03
280			St. Francis (N.Y.)	82.78	Md.-E. Shore	83.89
281			Rider	82.58	St. Francis (N.Y.)	81.79
282			Brown	82.32		
283			Loyola (Md.)	82.07		
284			Alcorn St.	81.47		
285			Columbia	81.43		
286			Augusta St.	80.55		
287			Delaware St.	80.19		
288			N. Arizona	80.02		
289			Cent. Connecticut St.	79.65		
290			Wagner College	79.18		
291			SE Louisiana	78.48		
292			Md.-E. Shore	71.21		
293			Brooklyn	69.81		

Table 47: 1989-1990 Final Ratings

	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Houston	148.08	UNLV	126.52	Stanford	117.07
2	Florida St.	139.81	Oklahoma	123.63	Louisiana Tech	116.63
3	Miami (Fla.)	138.12	Kansas	123.00	Tennessee	114.67
4	Notre Dame	138.07	Arizona	122.14	Texas	113.73
5	Colorado	135.86	Georgetown	121.34	UNLV	113.25
6	Clemson	134.73	Connecticut	120.60	Stephen F. Austin	113.07
7	Southern Cal	134.24	Duke	120.48	Auburn	113.03
8	Nebraska	132.65	Arkansas	119.79	Iowa	112.81
9	Auburn	129.71	Georgia Tech	119.63	Washington	112.36
10	Michigan	129.71	Alabama	118.99	N. Carolina St.	111.87
11	Texas A&M	129.36	Syracuse	118.91	Georgia	111.08
12	Michigan St.	128.62	Loyola Marymount	118.20	Long Beach St.	111.06
13	Alabama	128.26	Illinois	118.00	Virginia	110.79
14	Washington	128.09	Michigan	117.65	Hawaii	110.44
15	Arkansas	126.67	N. Carolina St.	117.54	Purdue	110.06
16	Tennessee	126.56	Minnesota	117.51	Arkansas	109.67
17	Illinois	125.45	Purdue	117.31	South Carolina	109.66
18	Penn St.	124.12	Michigan St.	117.20	Maryland	109.35
19	Virginia	123.71	Indiana	116.68	Kentucky	109.26
20	Oklahoma	123.44	LSU	116.36	N. Illinois	109.25

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
21	Texas Tech	122.21	Clemson	116.26	Northwestern	108.90
22	Arizona	122.11	Louisville	116.18	Penn St.	108.88
23	LSU	121.88	North Carolina	116.03	Mississippi	108.75
24	West Virginia	121.76	Providence	115.38	Southern Miss.	108.63
25	Washington St.	121.74	Ohio St.	114.94	LSU	108.47
26	Baylor	121.01	La Salle	114.85	Vanderbilt	108.45
27	Oregon	121.01	Xavier (Ohio)	114.23	Montana	108.38
28	Georgia Southern	120.60	St. John's	114.20	Providence	108.36
29	Florida	119.99	Texas	114.10	Tennessee Tech	108.27
30	Pittsburgh	119.37	UC Santa Barbara	113.60	Old Dominion	108.16
31	Brigham Young	119.15	Ball St.	113.53	Connecticut	107.48
32	Georgia	119.04	Missouri	113.37	Florida St.	107.45
33	Syracuse	118.00	UCLA	113.29	St. Joseph's (Pa.)	107.42
34	Duke	117.74	Pittsburgh	113.24	Clemson	107.39
35	Hawaii	116.96	Virginia	113.21	Colorado	107.10
36	Georgia Tech	116.96	Notre Dame	113.07	Ohio St.	106.99
37	UCLA	116.26	Georgia	112.82	Rutgers	106.79
38	N. Carolina St.	116.19	Houston	112.61	California	106.75
39	Virginia Tech	116.09	New Mexico St.	112.37	UCLA	106.69
40	Ohio St.	115.96	Oregon St.	112.30	Oregon	106.52
41	Air Force	115.64	Maryland	112.29	Texas Tech	106.42

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
42	Louisville	115.07	Dayton	112.11	W. Kentucky	106.42
43	Southern Miss.	114.66	Ala.-Birmingham	112.07	Utah	106.29
44	Mississippi	114.62	Kansas St.	111.92	Oklahoma St.	106.12
45	Maryland	113.83	New Mexico	111.67	Washington St.	106.09
46	Texas	113.36	SW Missouri St.	111.36	Notre Dame	105.78
47	South Carolina	112.78	UTEP	111.19	Michigan	105.78
48	Colorado St.	112.78	Villanova	111.16	Miami (Fla.)	105.75
49	Arizona St.	112.71	Brigham Young	110.38	Illinois St.	105.73
50	Army	112.67	Colorado St.	110.33	Kansas St.	105.70
51	Indiana	111.97	Vanderbilt	110.26	Houston	105.64
52	Holy Cross	111.87	Oklahoma St.	110.24	Toledo	105.57
53	Mississippi St.	111.63	Long Beach St.	110.08	Fresno St.	105.53
54	Kentucky	111.57	Memphis	109.94	DePaul	105.50
55	Stanford	110.57	Kentucky	109.89	Alabama	105.48
56	California	110.46	DePaul	109.80	Kansas	105.40
57	Stephen F. Austin	110.14	Hawaii	109.79	Northwestern St.	105.35
58	Furman	109.32	Stanford	109.79	Wake Forest	105.23
59	Wyoming	108.78	California	109.71	Missouri	105.18
60	Minnesota	108.70	Seton Hall	109.63	Lamar	105.07
61	Boston College	108.60	Mississippi St.	109.48	Michigan St.	104.91
62	East Carolina	108.21	St. Louis	109.08	Duke	104.71

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
63	Fresno St.	107.62	Wisconsin	109.03	Maine	104.68
64	Louisiana Tech	107.02	Temple	109.01	NE. Louisiana	104.56
65	Iowa St.	106.49	Wake Forest	108.93	St. Mary's (Cal.)	104.53
66	Tulsa	106.02	Marquette	108.75	Richmond	104.51
67	SW Louisiana	105.82	Tennessee	107.80	Texas A&M	104.39
68	Texas Christian	105.56	S. Illinois	107.62	Boston College	104.36
69	Maine	105.51	Mississippi	107.35	Miami (Ohio)	104.13
70	Oregon St.	105.38	Auburn	107.29	Fairfield	104.05
71	Oklahoma St.	105.08	Cincinnati	107.20	Ala.-Birmingham	104.02
72	Tulane	104.87	Wyoming	107.12	West Virginia	103.95
73	Iowa	104.71	Penn St.	107.08	N.C. Charlotte	103.93
74	Purdue	104.43	E. Tennessee St.	106.95	Illinois	103.69
75	Montana	104.25	Southern Miss.	106.77	Florida	103.65
76	San Diego St.	103.85	Idaho	106.72	Bowling Green	103.63
77	SW Missouri St.	103.54	Massachusetts	106.67	Pacific	103.56
78	Youngstown St.	103.33	Bowling Green	106.58	Temple	103.50
79	Grambling	103.19	Texas Christian	106.47	San Francisco	103.43
80	N. Illinois	103.11	Southern Cal	106.18	Cal St.-Fullerton	103.43
81	Vanderbilt	102.89	Oregon	106.18	Holy Cross	103.42
82	Appalachian St.	102.41	N. Iowa	106.09	S. Illinois	103.42
83	Rice	102.31	Utah	105.94	Arizona St.	103.40

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
84	Wake Forest	102.30	Wis.-Green Bay	105.87	James Madison	103.29
85	Akron	101.56	Louisiana Tech	105.83	Seton Hall	103.20
86	Middle Tenn. St.	101.40	Princeton	105.77	Wyoming	103.17
87	James Madison	101.37	Cal St.-Fullerton	105.21	Dartmouth	103.13
88	Rutgers	101.32	New Orleans	105.14	Georgia Tech	103.11
89	San Jose St.	100.79	Rutgers	105.08	Idaho	103.11
90	E. Illinois	100.58	Arizona St.	105.06	Syracuse	103.03
91	Navy	99.72	Kent	105.03	SW Missouri St.	102.98
92	Ball St.	99.24	Illinois St.	104.94	South Alabama	102.94
93	E. Kentucky	99.01	Iowa St.	104.94	St. Peter's	102.89
94	New Mexico	98.90	West Virginia	104.92	North Carolina	102.82
95	Arkansas St.	98.78	Florida St.	104.72	Arizona	102.78
96	William & Mary	98.18	Colorado	104.63	New Mexico St.	102.71
97	Wisconsin	98.08	Creighton	104.61	San Diego	102.71
98	W. Kentucky	98.05	Miami (Ohio)	104.61	Indiana	102.71
99	Idaho	97.96	Tulsa	104.57	North Texas	102.69
100	Villanova	97.89	Old Dominion	104.19	Iowa St.	102.67
101	Delaware	97.45	Pepperdine	104.19	Southern Cal	102.36
102	Cal St.-Fullerton	97.39	NE. Louisiana	104.12	Virginia Tech	102.36
103	Memphis	97.36	Fresno St.	103.97	SW Texas St.	102.25
104	Nevada	97.31	Fordham	103.97	Louisville	102.24

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
105	E. Michigan	97.04	Holy Cross	103.90	St. John's	102.20
106	North Carolina	96.79	Florida	103.89	Grambling	102.17
107	Missouri	96.65	Iowa	103.84	SE Louisiana	102.13
108	Cent. Michigan	96.58	Washington	103.80	Pittsburgh	102.02
109	N. Iowa	96.26	Evansville	103.80	Murray St.	102.01
110	Connecticut	96.24	Baylor	103.52	New Orleans	101.91
111	New Hampshire	96.12	E. Michigan	103.35	Alcorn St.	101.81
112	Liberty	96.05	Rhode Island	103.08	George Washington	101.81
113	Jackson St.	95.89	Northwestern	103.04	Ball St.	101.81
114	Utah	95.83	South Florida	103.00	Furman	101.55
115	Boston U.	95.07	James Madison	102.99	Mo.-Kansas City	101.51
116	Kansas	94.57	N.C. Charlotte	102.96	Nebraska	101.46
117	McNeese St.	94.27	Pacific	102.86	Portland St.	101.42
118	Marshall	94.25	Wichita St.	102.71	Bradley	101.36
119	Lamar	94.15	Texas-Pan American	102.50	Villanova	101.08
120	Massachusetts	94.08	Utah St.	102.45	E. Illinois	100.98
121	Temple	93.71	SW Louisiana	102.42	UC Santa Barbara	100.98
122	Northwestern St.	93.36	San Diego	101.91	Arkansas St.	100.95
123	W. Michigan	93.32	Texas A&M	101.85	Appalachian St.	100.85
124	Alcorn St.	93.01	South Carolina	101.82	Butler	100.77
125	SW Texas St.	92.72	Boston College	101.62	Boise St.	100.57

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
126	Toledo	92.52	Cleveland St.	101.58	Minnesota	100.54
127	Lafayette	92.47	Texas Southern	101.52	Weber St.	100.51
128	NE. Louisiana	92.38	Air Force	101.32	Florida Int'l	100.48
129	UTEP	91.81	Toledo	101.10	Wisconsin	100.46
130	Boise St.	91.76	Nebraska	101.06	East Carolina	100.46
131	Princeton	91.65	Robert Morris	100.97	Canisius	100.43
132	Nicholls St.	91.62	Appalachian St.	100.90	Oregon St.	100.41
133	Indiana St.	91.59	Virginia Tech	100.90	Georgia Southern	100.34
134	Illinois St.	90.90	Rice	100.84	Siena	100.17
135	Southern Meth.	90.84	Southern	100.76	Mississippi St.	100.10
136	Yale	90.61	E. Washington	100.75	La Salle	100.08
137	Lehigh	89.59	Montana	100.71	Middle Tenn. St.	100.04
138	Tn.-Chattanooga	89.21	Wright St.	100.51	Georgetown	100.01
139	North Texas	89.19	Ark.-Little Rock	100.19	Tn.-Chattanooga	100.00
140	E. Washington	89.07	Richmond	100.09	Loyola (Ill.)	99.95
141	Kansas St.	89.05	South Alabama	99.82	Oklahoma	99.92
142	Murray St.	88.92	W. Illinois	99.61	Texas Christian	99.91
143	Northwestern	87.88	Ill.-Chicago	99.46	Texas-Arlington	99.88
144	Colgate	87.62	Cent. Michigan	99.45	Pepperdine	99.87
145	W. Carolina	86.95	Boston U.	99.43	E. Washington	99.85
146	Dartmouth	86.80	Detroit	99.38	Loyola Marymount	99.81

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
147	Citadel	86.79	San Diego St.	99.28	E. Kentucky	99.72
148	W. Illinois	86.49	San Jose St.	99.18	Colorado St.	99.61
149	Bowling Green	86.40	Bradley	99.15	Gonzaga	99.50
150	Howard	86.34	Monmouth (N.J.)	98.81	Manhattan	99.39
151	Northeastern	86.04	Southern Meth.	98.80	Cent. Michigan	99.37
152	UNLV	86.02	Washington St.	98.79	Youngstown St.	99.35
153	Utah St.	85.61	Arkansas St.	98.77	Drake	99.35
154	Rhode Island	85.52	American U.	98.75	George Mason	99.28
155	Florida A&M	85.37	Virginia Commonwealth	98.59	Wis.-Green Bay	99.25
156	S. Illinois	85.04	Marshall	98.58	Santa Clara	99.20
157	Bucknell	85.04	Murray St.	98.41	Boston U.	99.13
158	Harvard	85.04	Loyola (Ill.)	98.40	Brigham Young	99.12
159	Tennessee St.	85.01	Siena	98.27	Cent. Connecticut St.	98.99
160	E. Tennessee St.	84.97	Towson St.	98.14	Radford	98.92
161	Southern	84.34	Texas-San Antonio	98.09	Sam Houston St.	98.92
162	Alabama St.	84.28	UC Irvine	98.08	San Diego St.	98.89
163	Pacific	83.01	Drake	98.06	E. Michigan	98.86
164	Ohio U.	82.33	N. Illinois	98.00	Montana St.	98.80
165	Delaware St.	82.24	Nevada	97.87	Ohio U.	98.79
166	Miami (Ohio)	82.00	Duquesne	97.86	W. Michigan	98.54
167	Cornell	81.97	Jacksonville	97.86	Idaho St.	98.49

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
168	Towson St.	81.55	W. Kentucky	97.71	Delaware	98.40
169	Long Beach St.	81.38	Hartford	97.56	Lehigh	98.30
170	Montana St.	81.31	Coastal Carolina	97.55	Indiana St.	98.29
171	Samford	80.88	Butler	97.53	Portland	98.24
172	Sam Houston St.	80.86	Ohio U.	97.46	Fordham	97.99
173	N. Arizona	80.84	Centenary (La.)	97.33	Harvard	97.98
174	Richmond	80.30	Weber St.	97.31	Dayton	97.90
175	Tennessee Tech	79.89	George Washington	97.22	Tennessee St.	97.87
176	Pennsylvania	79.57	Miami (Fla.)	97.04	Rice	97.83
177	Cincinnati	79.53	Coppin St.	96.97	SW Louisiana	97.82
178	Morehead St.	79.26	Delaware	96.79	Creighton	97.75
179	Va. Military	79.09	George Mason	96.66	W. Illinois	97.72
180	Weber St.	78.67	Akron	96.63	Wichita St.	97.58
181	S. Carolina St.	78.57	Va. Military	96.60	Brown	97.55
182	Brown	78.17	Mo.-Kansas City	96.57	Memphis	97.55
183	Kent	77.73	Northeastern	96.52	South Florida	97.49
184	Idaho St.	77.27	Lehigh	96.21	Cincinnati	97.26
185	Bethune-Cookman	74.14	Indiana St.	96.13	Mount St. Mary's (Md.)	97.18
186	Texas Southern	72.86	Tennessee Tech	95.67	Jackson St.	97.17
187	New Mexico St.	72.58	Tn.-Chattanooga	95.66	San Jose St.	97.11
188	Columbia	72.16	Portland	95.48	Southern Meth.	97.10

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
189	Davidson	71.24	Montana St.	95.37	Virginia Commonwealth	97.07
190	N. Carolina A&T	71.24	St. Peter's	95.17	Marquette	97.05
191	Morgan St.	68.80	Furman	95.10	E. Tennessee St.	96.97
192	Austin Peay	68.28	W. Michigan	95.06	Xavier (Ohio)	96.85
193	Fordham	67.89	Lafayette	94.83	Morehead St.	96.84
194	Miss. Valley St.	52.96	Marist	94.82	Texas Southern	96.78
195	Prairie View A&M	48.86	Santa Clara	94.65	UTEP	96.76
196			Texas Tech	94.47	N. Arizona	96.67
197			Yale	94.42	Yale	96.57
198			E. Kentucky	94.42	Texas-San Antonio	96.54
199			Drexel	94.33	Nicholls St.	96.52
200			Middle Tenn. St.	94.33	Marshall	96.49
201			Georgia Southern	94.24	New Hampshire	96.37
202			Hofstra	94.22	St. Bonaventure	96.30
203			Tulane	94.20	Stetson	96.24
204			St. Joseph's (Pa.)	94.18	William & Mary	96.23
205			Fairleigh Dickinson	94.09	Howard	96.23
206			Austin Peay	94.04	Florida A&M	96.20
207			San Francisco	94.03	Tulane	96.13
208			Southern Utah	93.85	Princeton	96.05
209			Stetson	93.75	Drexel	95.99

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
210			E. Illinois	93.65	Pennsylvania	95.99
211			Iona	93.56	American U.	95.88
212			McNeese St.	93.42	Miss. Valley St.	95.87
213			Bucknell	93.37	Vermont	95.75
214			Citadel	93.12	Colgate	95.68
215			Mount St. Mary's (Md.)	92.98	N. Iowa	95.64
216			Pennsylvania	92.84	Kent	95.62
217			East Carolina	92.70	Columbia	95.53
218			N.C.-Asheville	92.18	Akron	95.35
219			Morehead St.	92.15	Valparaiso	95.15
220			Canisius	92.00	Cent. Florida	95.03
221			Boise St.	91.96	Massachusetts	94.97
222			St. Francis (Pa.)	91.62	Georgia St.	94.74
223			N.C.-Wilmington	91.55	N.C.-Wilmington	94.73
224			Gonzaga	91.49	Marist	94.71
225			U.S. Int'l	91.48	Fairleigh Dickinson	94.61
226			SW Texas St.	90.90	Nevada	94.60
227			Manhattan	90.85	N. Carolina A&T	94.59
228			W. Carolina	90.61	Rhode Island	94.56
229			Florida A&M	90.57	Evansville	94.48
230			St. Bonaventure	90.54	W. Carolina	94.44

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
231			Northwestern St.	90.43	Delaware St.	94.34
232			Maine	90.42	McNeese St.	94.12
233			Army	90.42	Towson St.	94.07
234			Fairfield	90.36	Southern Utah	94.03
235			Wagner College	89.79	Lafayette	93.96
236			Sam Houston St.	89.58	Detroit	93.95
237			Cornell	89.36	Baylor	93.87
238			Niagara	89.34	Augusta St.	93.66
239			Valparaiso	89.16	Wagner College	93.57
240			Vermont	89.10	Alabama St.	93.47
241			Lamar	88.80	Iona	93.38
242			Texas-Arlington	88.55	Cleveland St.	93.35
243			N. Carolina A&T	88.35	Morgan St.	93.22
244			Dartmouth	88.32	Niagara	93.14
245			Winthrop	88.25	Duquesne	93.09
246			Harvard	88.21	Mercer	92.86
247			Chicago St.	88.19	Prairie View A&M	92.86
248			Brown	88.14	Austin Peay	92.81
249			St. Mary's (Cal.)	87.97	UC Irvine	92.74
250			Navy	87.91	Northeastern	92.70
251			Miss. Valley St.	87.68	Campbell	92.59

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
252			Loyola (Md.)	87.17	Bucknell	92.35
253			Campbell	87.06	Southern	92.33
254			Tennessee St.	87.02	Cornell	92.00
255			Youngstown St.	86.89	S. Carolina St.	91.96
256			Delaware St.	86.59	St. Francis (Pa.)	91.73
257			Jackson St.	86.59	Ill.-Chicago	91.42
258			Hardin-Simmons	86.58	Md.-Baltimore County	91.37
259			Samford	86.39	Robert Morris	91.29
260			Alabama St.	86.28	Hartford	91.08
261			Charleston Southern	86.16	Rider	91.07
262			Colgate	86.15	Wright St.	90.96
263			N. Arizona	86.04	Md.-E. Shore	90.68
264			Grambling	85.98	Monmouth (N.J.)	90.39
265			Idaho St.	85.98	Winthrop	90.29
266			North Texas	85.70	St. Louis	90.10
267			S. Carolina St.	85.68	Texas-Pan American	89.97
268			Liberty	85.65	N.C.-Asheville	89.51
269			New Hampshire	85.58	Loyola (Md.)	89.17
270			William & Mary	85.58	Coppin St.	88.99
271			Radford	85.38	Long Island U.	88.87
272			Prairie View A&M	84.87	Hofstra	88.67

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	FB 1989		MBK 1989-1990		WBK 1989-1990	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
273			Rider	84.60	Brooklyn	88.50
274			Davidson	83.60	Coastal Carolina	87.67
275			Md.-Baltimore County	83.59	Chicago St.	86.97
276			Bethune-Cookman	83.46	Liberty	86.25
277			Mercer	83.30	St. Francis (N.Y.)	85.98
278			Columbia	83.28	Bethune-Cookman	84.23
279			St. Francis (N.Y.)	82.06	Charleston Southern	82.03
280			Alcorn St.	81.70		
281			Howard	81.56		
282			Long Island U.	81.08		
283			Morgan St.	80.86		
284			Cent. Florida	80.53		
285			Augusta St.	80.03		
286			Md.-E. Shore	79.94		
287			Cent. Connecticut St.	79.81		
288			Georgia St.	79.45		
289			Florida Int'l	78.85		
290			Stephen F. Austin	76.46		
291			Nicholls St.	75.81		
292			Brooklyn	72.03		

Table 48: 1990-1991 Final Ratings

	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Miami (Fla.)	142.50	UNLV	130.00	Virginia	115.56
2	Washington	139.32	North Carolina	127.34	Stanford	114.82
3	Florida St.	137.92	Arkansas	127.19	Georgia	114.43
4	Colorado	134.72	Duke	126.23	Purdue	114.20
5	Oklahoma	134.59	Kansas	125.30	Tennessee	113.94
6	Virginia	134.04	Arizona	124.19	Auburn	113.57
7	Georgia Tech	133.93	Indiana	122.70	Penn St.	112.79
8	Clemson	133.58	Oklahoma St.	120.94	Washington	112.57
9	Florida	133.16	Seton Hall	119.46	N. Carolina St.	112.28
10	Michigan	132.45	Missouri	118.58	Arkansas	111.53
11	Tennessee	131.86	UCLA	118.45	Iowa	111.10
12	Nebraska	131.82	Syracuse	117.88	Texas	110.92
13	Texas A&M	130.68	Ohio St.	117.62	Long Beach St.	110.67
14	Texas	129.98	Nebraska	117.55	Lamar	110.54
15	Notre Dame	129.88	Connecticut	117.10	Connecticut	110.19
16	Houston	129.65	Georgetown	116.96	LSU	110.03
17	Penn St.	127.61	Georgia Tech	116.76	Northwestern	109.89
18	Iowa	125.73	N. Carolina St.	116.51	Stephen F. Austin	109.76
19	Southern Cal	124.74	Kentucky	116.34	Oklahoma St.	109.56
20	N. Carolina St.	123.76	Pittsburgh	116.09	Florida St.	109.47

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
21	Ohio St.	123.67	LSU	115.90	W. Kentucky	109.20
22	Syracuse	123.19	Oklahoma	115.80	Cal St.-Fullerton	109.03
23	Michigan St.	122.53	Virginia	114.96	Vanderbilt	108.65
24	Oregon	121.89	Wake Forest	114.78	UNLV	108.64
25	Brigham Young	121.82	St. John's	114.71	Michigan St.	108.50
26	Virginia Tech	121.58	Temple	114.55	Clemson	108.48
27	Alabama	121.40	Georgia	114.54	Kentucky	108.38
28	Auburn	120.25	Alabama	114.45	Southern Cal	108.33
29	South Carolina	119.32	Stanford	114.13	Rutgers	108.31
30	Illinois	119.08	DePaul	113.59	Montana	108.28
31	Louisville	119.07	Southern Cal	113.53	Maryland	108.27
32	North Carolina	118.56	Arizona St.	113.53	SW Missouri St.	108.26
33	San Jose St.	118.20	Texas	113.37	Texas Tech	108.23
34	UCLA	117.78	Colorado	112.97	UCLA	108.14
35	Maryland	117.62	Villanova	112.74	Houston	108.08
36	Baylor	117.49	Providence	112.28	Washington St.	107.82
37	California	117.27	Kansas St.	112.17	Oregon St.	107.77
38	Southern Miss.	117.20	Vanderbilt	112.10	South Carolina	107.60
39	Stanford	116.88	Utah	112.03	Indiana	107.57
40	San Diego St.	116.79	E. Tennessee St.	111.82	Providence	107.47
41	Indiana	116.71	Michigan St.	111.77	Louisiana Tech	107.36

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
42	Texas Tech	115.20	Purdue	111.33	Mississippi	107.29
43	Hawaii	114.43	West Virginia	111.28	Utah	107.14
44	Arizona St.	114.30	Iowa	110.97	James Madison	107.10
45	Georgia Southern	113.74	E. Michigan	110.85	Toledo	106.79
46	Mississippi	113.35	Cincinnati	110.79	Santa Clara	106.69
47	Louisiana Tech	113.23	New Mexico St.	110.72	California	106.65
48	Colorado St.	112.10	Mississippi St.	110.65	Notre Dame	106.36
49	Duke	111.96	Louisiana Tech	110.63	Nebraska	106.33
50	Rice	111.71	Creighton	110.58	Arizona St.	106.27
51	Arizona	111.71	Penn St.	110.49	Maine	106.16
52	Pittsburgh	111.55	Houston	110.43	Tennessee Tech	106.15
53	Mississippi St.	110.85	Brigham Young	110.27	Kansas	105.98
54	Minnesota	110.81	Florida St.	110.18	Alabama	105.97
55	Middle Tenn. St.	109.71	Maryland	110.16	St. Mary's (Cal.)	105.94
56	East Carolina	109.66	Iowa St.	110.10	Richmond	105.81
57	Iowa St.	109.58	Illinois	109.96	N.C. Charlotte	105.64
58	LSU	109.27	Rutgers	109.21	Colorado	105.60
59	Temple	109.02	Siena	108.95	Georgia Tech	105.50
60	Tulane	109.01	Princeton	108.80	Wake Forest	105.50
61	West Virginia	108.47	Wisconsin	108.72	S. Illinois	105.37
62	Oklahoma St.	108.46	Minnesota	108.60	Duke	105.37

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
63	Furman	108.28	Louisville	108.55	N. Illinois	105.19
64	Air Force	108.04	George Washington	108.41	Louisville	105.17
65	Memphis	107.90	S. Illinois	108.40	Illinois St.	105.09
66	William & Mary	107.77	Tulane	108.34	Ala.-Birmingham	105.02
67	Georgia	107.70	Massachusetts	108.18	Oregon	104.90
68	Texas Christian	107.62	Boston College	108.15	Creighton	104.88
69	Washington St.	106.98	California	108.05	Florida	104.81
70	Wyoming	106.59	New Mexico	107.93	Wis.-Green Bay	104.73
71	Holy Cross	106.45	Michigan	107.66	West Virginia	104.72
72	Arkansas	106.41	Memphis	107.60	Kansas St.	104.60
73	Missouri	106.28	Oregon	107.49	UC Santa Barbara	104.54
74	N. Illinois	106.10	N. Illinois	107.13	Miami (Fla.)	104.42
75	Boston College	106.07	Rice	107.12	George Washington	104.22
76	Idaho	105.78	Clemson	107.12	Southern Miss.	104.05
77	Wake Forest	105.71	Wyoming	107.10	Holy Cross	104.05
78	Kentucky	105.31	New Orleans	106.94	Wisconsin	104.03
79	Cent. Florida	105.29	South Alabama	106.85	Ohio St.	103.70
80	Kansas	104.99	St. Peter's	106.81	Illinois	103.52
81	Cent. Michigan	104.98	Washington St.	106.77	DePaul	103.45
82	Marshall	104.58	Tulsa	106.77	Pacific	103.32
83	SW Louisiana	104.03	Pepperdine	106.74	St. John's	103.31

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
84	Nevada	104.03	Oregon St.	106.59	Michigan	103.26
85	Army	103.56	Washington	106.28	Miami (Ohio)	103.23
86	Purdue	103.44	Xavier (Ohio)	106.20	San Diego	103.05
87	Fresno St.	103.16	Southern Miss.	106.15	Tn.-Chattanooga	102.99
88	Youngstown St.	103.13	Florida	106.03	Fairfield	102.94
89	Boise St.	103.12	SW Missouri St.	105.99	Cent. Michigan	102.91
90	Kansas St.	102.85	South Carolina	105.92	Texas A&M	102.88
91	Toledo	102.39	Wis.-Green Bay	105.78	NE. Louisiana	102.85
92	SW Missouri St.	102.09	UTEP	105.77	Youngstown St.	102.83
93	E. Kentucky	102.06	Arkansas St.	105.76	Seton Hall	102.76
94	Wisconsin	101.96	Bowling Green	105.68	North Carolina	102.76
95	Ball St.	99.94	Tennessee	105.60	Hawaii	102.70
96	Citadel	99.18	La Salle	105.15	Iowa St.	102.66
97	Northwestern	98.71	Southern Meth.	104.89	Montana St.	102.63
98	Tulsa	98.36	Baylor	104.73	Fresno St.	102.52
99	New Hampshire	98.26	St. Joseph's (Pa.)	104.64	St. Joseph's (Pa.)	102.48
100	N. Iowa	98.18	Notre Dame	104.52	New Mexico St.	102.42
101	Tn.-Chattanooga	97.48	Richmond	104.50	Mo.-Kansas City	102.24
102	Villanova	97.36	Miami (Fla.)	104.08	Alcorn St.	102.23
103	Rutgers	97.10	Ala.-Birmingham	104.08	Arkansas St.	102.17
104	Utah St.	97.10	Murray St.	104.04	Old Dominion	102.10

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
105	Connecticut	96.95	UC Santa Barbara	104.01	New Orleans	101.96
106	W. Michigan	96.88	Duquesne	103.98	Missouri	101.94
107	Liberty	96.51	Miami (Ohio)	103.80	Kent	101.87
108	Navy	96.46	Auburn	103.75	Oklahoma	101.84
109	Akron	96.34	NE. Louisiana	103.16	Virginia Tech	101.64
110	Montana	96.14	SW Louisiana	103.09	Indiana St.	101.60
111	Alabama St.	95.94	St. Francis (Pa.)	102.97	Pittsburgh	101.59
112	New Mexico	95.82	Hawaii	102.76	Portland St.	101.57
113	Jackson St.	95.36	Fordham	102.66	San Diego St.	101.46
114	Massachusetts	94.65	Texas Christian	102.64	Siena	101.36
115	Utah	94.59	Ball St.	102.60	Bradley	101.34
116	Oregon St.	94.23	Iona	102.58	Marshall	101.30
117	SW Texas St.	93.65	San Diego	102.55	St. Peter's	101.29
118	NE. Louisiana	93.48	James Madison	102.54	Bowling Green	101.27
119	Lehigh	93.46	Coastal Carolina	102.20	Boston College	101.26
120	Miami (Ohio)	93.34	Coppin St.	102.10	San Francisco	101.20
121	Appalachian St.	93.00	Colorado St.	101.84	Mercer	101.07
122	UTEP	92.71	St. Louis	101.81	Pepperdine	101.05
123	Vanderbilt	92.67	Mississippi	101.64	South Alabama	101.00
124	Delaware	92.27	Old Dominion	101.56	Butler	100.99
125	Bowling Green	91.71	Fresno St.	101.43	Villanova	100.91

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
126	Long Beach St.	91.48	San Diego St.	101.37	Middle Tenn. St.	100.66
127	Southern Meth.	91.45	Virginia Tech	101.36	Grambling	100.64
128	Weber St.	91.24	South Florida	101.29	La Salle	100.61
129	James Madison	91.18	Pacific	101.18	Wyoming	100.60
130	Pacific	91.12	Santa Clara	101.12	SW Texas St.	100.57
131	Dartmouth	91.11	Marquette	101.08	Georgetown	100.45
132	North Texas	90.71	Butler	100.92	Florida Int'l	100.30
133	Northwestern St.	90.70	Indiana St.	100.88	Weber St.	100.28
134	Arkansas St.	90.57	Robert Morris	100.81	E. Kentucky	100.25
135	Bucknell	90.00	Fairleigh Dickinson	100.61	Gonzaga	100.12
136	Montana St.	89.79	W. Kentucky	100.54	Rice	100.11
137	Rhode Island	89.71	Texas-San Antonio	100.31	E. Illinois	100.06
138	Stephen F. Austin	89.54	Dayton	100.29	Baylor	100.06
139	Colgate	89.41	Lamar	100.25	Arizona	100.05
140	UNLV	89.07	N.C. Charlotte	100.11	Texas-San Antonio	99.91
141	Morehead St.	88.83	Montana	100.11	Dayton	99.88
142	Nicholls St.	88.34	George Mason	99.92	George Mason	99.85
143	Boston U.	88.17	Furman	99.90	Northwestern St.	99.80
144	Grambling	88.11	Ohio U.	99.84	E. Michigan	99.79
145	W. Kentucky	88.07	Cent. Michigan	99.77	Virginia Commonwealth	99.72
146	Tennessee St.	87.54	Long Beach St.	99.66	Syracuse	99.65

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
147	Sam Houston St.	87.49	Texas Tech	99.65	Minnesota	99.63
148	Maine	87.46	Northeastern	99.64	Drake	99.50
149	E. Michigan	87.03	Cal St.-Fullerton	99.48	Vermont	99.47
150	N. Carolina A&T	86.63	Boise St.	99.38	Idaho St.	99.43
151	Samford	86.55	Loyola Marymount	99.30	Evansville	99.38
152	E. Tennessee St.	86.04	Tn.-Chattanooga	99.27	Ohio U.	99.37
153	McNeese St.	85.88	Utah St.	99.23	South Florida	99.31
154	E. Illinois	85.61	Rhode Island	99.14	Memphis	99.27
155	Delaware St.	85.46	Idaho	99.08	Furman	99.25
156	E. Washington	85.34	Toledo	98.99	Georgia Southern	99.24
157	Cornell	84.95	Bucknell	98.74	Manhattan	99.21
158	Illinois St.	84.88	E. Kentucky	98.52	Temple	99.08
159	Indiana St.	84.77	Middle Tenn. St.	98.45	Harvard	99.06
160	Florida A&M	83.75	St. Mary's (Cal.)	98.21	Idaho	99.04
161	Cincinnati	83.40	Monmouth (N.J.)	98.17	Tennessee St.	99.00
162	Yale	82.53	Lehigh	97.99	Xavier (Ohio)	98.99
163	Tennessee Tech	82.12	American U.	97.94	East Carolina	98.98
164	S. Illinois	81.38	E. Illinois	97.80	N. Carolina A&T	98.84
165	Kent	81.29	Towson St.	97.64	Army	98.83
166	W. Illinois	80.98	Marshall	97.60	Brigham Young	98.76
167	Idaho St.	80.93	Holy Cross	97.59	SE Louisiana	98.68

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
168	Va. Military	80.12	Nevada	97.51	St. Bonaventure	98.65
169	W. Carolina	79.63	Wis.-Milwaukee	97.48	Florida A&M	98.63
170	Richmond	79.12	Wright St.	97.37	Southern Meth.	98.56
171	Ohio U.	78.88	Austin Peay	97.28	Appalachian St.	98.55
172	N. Arizona	78.69	Yale	97.21	Boise St.	98.54
173	Southern	78.56	Wichita St.	97.15	Valparaiso	98.53
174	Towson St.	77.56	Kent	96.98	W. Michigan	98.50
175	Harvard	76.89	Southern Utah	96.98	Loyola Marymount	98.40
176	Pennsylvania	76.64	UC Irvine	96.97	Texas-Arlington	98.40
177	New Mexico St.	76.07	Gonzaga	96.96	Campbell	98.33
178	Howard	75.73	Virginia Commonwealth	96.93	Mississippi St.	98.29
179	Cal St.-Fullerton	75.71	Evansville	96.88	Morehead St.	98.28
180	S. Carolina St.	75.10	Texas A&M	96.67	Brown	98.26
181	Lafayette	74.96	Bradley	96.62	W. Illinois	98.26
182	Princeton	73.85	N. Iowa	96.56	Murray St.	98.08
183	Alcorn St.	73.57	Hartford	96.02	Pennsylvania	97.95
184			Detroit	95.99	Jackson St.	97.68
185	Texas Southern	71.49	Weber St.	95.66	Princeton	97.67
186	Austin Peay	69.75	Akron	95.62	Loyola (Ill.)	97.66
187	Miss. Valley St.	68.37	Stetson	95.60	Sam Houston St.	97.64
188	Brown	67.60	Appalachian St.	95.30	Colorado St.	97.46

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
189	Bethune-Cookman	67.38	Delaware	95.27	Ball St.	97.43
190	Northeastern	67.08	Tennessee Tech	95.08	Fordham	97.31
191	Murray St.	64.56	Northwestern	95.07	Miss. Valley St.	97.27
192	Columbia	63.53	Southern	95.03	Detroit	97.24
193	Fordham	59.92	Ill.-Chicago	94.75	E. Tennessee St.	97.24
194	Morgan St.	50.81	Manhattan	94.69	Cent. Florida	97.23
195			Jackson St.	94.68	North Texas	97.14
196			Cleveland St.	94.67	UC Irvine	97.00
197			Georgia Southern	94.65	E. Washington	96.89
198			Drexel	94.47	William & Mary	96.79
199			Air Force	93.92	S. Carolina St.	96.74
200			Canisius	93.91	Wichita St.	96.71
201			Texas-Arlington	93.79	Texas Christian	96.69
202			William & Mary	93.60	Cal St.-Northridge	96.45
203			Niagara	93.49	Boston U.	96.20
204			Loyola (Md.)	93.40	Georgia St.	96.14
205			Georgia St.	93.07	Canisius	96.13
206			Hofstra	93.05	Texas Southern	96.07
207			Mo.-Kansas City	93.00	Tulane	95.91
208			N.C.-Wilmington	92.99	Colgate	95.72
209			Pennsylvania	92.99	New Hampshire	95.68

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
210			E. Washington	92.85	UTEP	95.59
211			San Jose St.	92.70	Hartford	95.54
212			Delaware St.	92.57	Lafayette	95.43
213			Jacksonville	92.49	N. Iowa	95.40
214			Alabama St.	92.43	American U.	95.38
215			Texas-Pan American	92.36	Coppin St.	95.30
216			Radford	92.29	Cincinnati	95.26
217			Loyola (Ill.)	92.17	Delaware	95.14
218			Rider	92.10	Rhode Island	95.04
219			Cent. Florida	92.06	Cleveland St.	95.00
220			Maine	91.98	N.C.-Wilmington	94.98
221			W. Illinois	91.92	Duquesne	94.96
222			East Carolina	91.87	Ill.-Chicago	94.82
223			San Francisco	91.82	Nevada	94.80
224			Navy	91.80	Md.-Baltimore County	94.59
225			Vermont	91.80	Wis.-Milwaukee	94.54
226			Drake	91.78	Marquette	94.48
227			Ark.-Little Rock	91.75	Nicholls St.	94.45
228			North Texas	91.72	Portland	94.38
229			W. Michigan	91.63	Columbia	94.37
230			Fairfield	91.44	Md.-E. Shore	94.32

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
231			Montana St.	91.25	Mount St. Mary's (Md.)	94.31
232			St. Bonaventure	91.03	Howard	94.24
233			Lafayette	90.97	Niagara	93.92
234			Texas Southern	90.86	Radford	93.84
235			Brown	90.53	Delaware St.	93.83
236			Illinois St.	90.51	Alabama St.	93.78
237			N. Carolina A&T	90.47	Wright St.	93.63
238			St. Francis (N.Y.)	90.26	San Jose St.	93.36
239			S. Carolina St.	89.91	Drexel	93.26
240			Boston U.	89.84	Brooklyn	93.24
241			Idaho St.	89.83	Liberty	93.16
242			Dartmouth	89.83	Robert Morris	93.14
243			Florida A&M	89.75	Wagner College	93.13
244			Davidson	89.62	Dartmouth	93.00
245			Morehead St.	89.58	Austin Peay	92.83
246			Howard	89.21	Marist	92.55
247			Youngstown St.	88.85	Cent. Connecticut St.	92.46
248			Va. Military	88.83	Lehigh	92.36
249			W. Carolina	88.48	Augusta St.	92.18
250			Cornell	88.36	Cornell	92.13
251			Augusta St.	88.25	Rider	92.11

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
252			McNeese St.	88.12	St. Francis (Pa.)	92.09
253			Mount St. Mary's (Md.)	88.05	Yale	91.82
254			Stephen F. Austin	87.82	SW Louisiana	91.79
255			Centenary (La.)	87.69	N. Arizona	91.68
256			Harvard	87.52	Akron	91.57
257			Portland	87.31	Texas-Pan American	91.51
258			Valparaiso	87.11	Monmouth (N.J.)	91.44
259			Columbia	86.93	Morgan St.	91.44
260			Marist	86.88	Stetson	91.31
261			Miss. Valley St.	86.59	W. Carolina	91.13
262			Md.-Baltimore County	86.41	Towson St.	91.08
263			Tennessee St.	86.31	McNeese St.	91.00
264			Colgate	86.00	Fairleigh Dickinson	90.91
265			Charleston Southern	85.63	Chicago St.	90.86
266			SW Texas St.	85.56	NE Illinois	90.77
267			Cal St.-Northridge	85.43	Southern Utah	90.73
268			Citadel	85.37	Northeastern	90.57
269			Army	85.31	Iona	90.55
270			Long Island U.	85.02	Bucknell	90.53
271			Sam Houston St.	84.73	Loyola (Md.)	90.49
272			SE Louisiana	83.78	Coastal Carolina	90.32

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
273			New Hampshire	83.69	N.C.-Asheville	89.50
274			Liberty	83.62	Southern	89.41
275			Northwestern St.	83.34	Hofstra	89.29
276			Brooklyn	83.30	Massachusetts	88.84
277			Morgan St.	82.79	Prairie View A&M	87.86
278			Alcorn St.	82.38	Bethune-Cookman	87.71
279			Wagner College	82.25	St. Francis (N.Y.)	87.30
280			Cent. Connecticut St.	81.94	St. Louis	87.13
281			Winthrop	81.28	Long Island U.	86.62
282			Nicholls St.	80.98	Winthrop	85.35
283			Chicago St.	80.32	Charleston Southern	81.01
284			Florida Int'l	80.26		
285			N. Arizona	80.20		
286			N.C.-Asheville	79.89		
287			Samford	79.72		
288			Campbell	77.96		
289			Mercer	76.85		
290			Grambling	76.44		
291			Md.-E. Shore	76.03		
292			Bethune-Cookman	75.91		
293			Prairie View A&M	73.80		

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	FB 1990		MBK 1990-1991		WBK 1990-1991	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
294			U.S. Int'l	72.50		
295			NE Illinois	71.60		

Table 49: 1991-1992 Final Ratings

	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Washington	149.23	Indiana	129.08	Virginia	116.53
2	Miami (Fla.)	140.80	Duke	125.77	Stanford	114.35
3	Penn St.	139.19	Kansas	124.17	Tennessee	113.59
4	Michigan	138.77	Ohio St.	123.78	Maryland	112.28
5	Florida St.	137.07	Cincinnati	123.56	Purdue	112.12
6	Nebraska	136.01	Arizona	122.08	SW Missouri St.	111.74
7	Florida	134.74	Kentucky	120.89	Penn St.	111.69
8	Texas A&M	134.48	Oklahoma St.	120.04	Iowa	111.55
9	Oklahoma	133.14	LSU	119.74	Vanderbilt	111.49
10	California	132.90	Michigan	118.93	Miami (Fla.)	110.76
11	Notre Dame	132.29	UNLV	118.84	W. Kentucky	110.63
12	Stanford	129.79	Arkansas	118.61	Texas Tech	110.35
13	Alabama	128.87	Oklahoma	118.56	Texas	110.34
14	Colorado	128.38	UCLA	117.68	Mississippi	109.76
15	UCLA	128.27	Iowa	117.36	Southern Cal	109.52
16	Tennessee	127.61	North Carolina	117.02	UCLA	109.50
17	Virginia	126.75	Michigan St.	116.85	West Virginia	109.48
18	Iowa	125.01	Massachusetts	116.62	Lamar	109.38
19	Clemson	124.62	Georgia Tech	115.84	Creighton	109.32
20	Syracuse	124.16	Missouri	115.61	Stephen F. Austin	109.31

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
21	Georgia Tech	122.83	Florida St.	115.49	California	109.08
22	Texas	121.83	Virginia	115.25	Auburn	108.74
23	Indiana	121.65	Seton Hall	115.24	Clemson	108.69
24	Brigham Young	121.55	St. John's	115.11	Kansas	108.50
25	Ohio St.	121.31	UTEP	114.99	North Carolina	108.40
26	Georgia	121.13	Brigham Young	114.98	Northwestern	108.38
27	Southern Cal	121.01	Stanford	114.69	Georgia Tech	108.36
28	Illinois	120.97	Connecticut	113.98	Arizona St.	108.27
29	Mississippi St.	120.37	Illinois	113.82	N. Carolina St.	108.24
30	Baylor	119.63	Purdue	113.76	UC Santa Barbara	108.14
31	East Carolina	119.28	Evansville	113.61	Wisconsin	108.13
32	Kansas	119.25	Southern Cal	113.41	Colorado	108.06
33	Arizona St.	119.20	Memphis	113.37	Alabama	107.56
34	N. Carolina St.	118.36	Georgetown	112.85	Louisiana Tech	107.46
35	Auburn	118.31	Alabama	112.55	Florida St.	107.31
36	North Carolina	118.25	DePaul	112.19	George Washington	107.31
37	Houston	117.99	Iowa St.	112.02	Montana	107.27
38	Boston College	117.57	Washington St.	111.81	Hawaii	107.26
39	Virginia Tech	117.18	Louisville	111.80	Washington	107.20
40	Kansas St.	116.23	Georgia	111.69	Indiana	107.18
41	Tulsa	115.96	Wake Forest	111.61	UNLV	107.02

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
42	Texas Tech	115.67	Nebraska	111.32	Santa Clara	107.00
43	Air Force	115.59	Villanova	111.25	Louisville	106.96
44	LSU	115.31	Syracuse	111.23	Connecticut	106.93
45	Fresno St.	115.25	Maryland	111.14	Toledo	106.92
46	Pittsburgh	114.30	Marquette	111.14	LSU	106.90
47	West Virginia	113.86	Minnesota	111.03	Georgia	106.86
48	Arkansas	113.84	New Mexico	110.94	Long Beach St.	106.86
49	South Carolina	113.23	Houston	110.90	Kentucky	106.72
50	Mississippi	112.68	Ala.-Birmingham	110.83	Vermont	106.66
51	San Diego St.	112.33	Notre Dame	110.68	Houston	106.42
52	Memphis	111.97	Texas	110.63	S. Illinois	106.31
53	Oregon	111.95	Florida	110.54	Arkansas St.	106.26
54	Washington St.	111.71	Tulane	110.54	Utah	106.15
55	Nevada	111.33	Temple	110.33	Rutgers	106.10
56	Arizona	111.11	Pittsburgh	110.09	Providence	106.07
57	Purdue	110.91	New Mexico St.	109.90	San Francisco	106.04
58	Texas Christian	110.19	Louisiana Tech	109.85	Bowling Green	106.01
59	Marshall	110.06	Boston College	109.66	Nebraska	106.01
60	San Jose St.	109.88	Rhode Island	109.17	Washington St.	105.97
61	Rutgers	108.82	La Salle	109.16	Southern Miss.	105.94
62	Louisiana Tech	108.33	West Virginia	109.13	Oregon	105.92

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
63	Bowling Green	107.92	Utah	109.08	DePaul	105.60
64	Vanderbilt	107.67	N.C. Charlotte	109.04	Ohio St.	105.43
65	Michigan St.	107.50	Wyoming	108.86	Georgetown	105.39
66	Wisconsin	107.14	Tennessee	108.85	San Diego St.	105.23
67	Kentucky	106.95	Pepperdine	108.60	New Orleans	105.01
68	Rice	106.93	Wisconsin	108.55	Boise St.	104.96
69	Duke	106.50	Auburn	108.36	Michigan St.	104.88
70	Hawaii	106.27	Miami (Ohio)	108.26	Ala.-Birmingham	104.86
71	Villanova	106.13	Colorado	108.21	Arkansas	104.78
72	Georgia Southern	105.97	Wis.-Green Bay	108.08	Oregon St.	104.67
73	Iowa St.	105.65	E. Tennessee St.	108.05	Missouri	104.67
74	Alabama St.	105.63	Providence	107.96	Wis.-Green Bay	104.55
75	UTEP	105.14	Texas Christian	107.94	Brigham Young	104.55
76	Utah	105.03	Vanderbilt	107.59	Florida	104.49
77	N. Iowa	104.95	Clemson	107.26	Duke	104.47
78	Southern Miss.	104.73	Penn St.	107.21	St. Mary's (Cal.)	104.38
79	Maryland	104.35	James Madison	107.18	Pepperdine	104.37
80	Furman	103.82	Oregon St.	106.99	Tennessee Tech	104.09
81	Wyoming	103.64	Rutgers	106.96	Oklahoma	104.04
82	Oklahoma St.	103.27	Arizona St.	106.94	Southern Meth.	103.90
83	Miami (Ohio)	102.90	N. Carolina St.	106.56	N.C. Charlotte	103.76

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
84	Boise St.	102.68	Butler	106.46	Xavier (Ohio)	103.75
85	Youngstown St.	102.20	Kansas St.	106.44	Florida Int'l	103.73
86	Missouri	102.13	SW Louisiana	106.43	Texas A&M	103.63
87	Northwestern	102.03	Montana	106.24	Middle Tenn. St.	103.45
88	Cent. Michigan	102.02	SW Missouri St.	106.15	N. Illinois	103.45
89	E. Kentucky	101.78	UC Santa Barbara	105.99	South Carolina	103.44
90	Samford	101.56	Richmond	105.84	La Salle	103.35
91	Minnesota	101.42	Princeton	105.79	St. John's	103.33
92	Wake Forest	101.03	South Florida	105.73	New Mexico St.	103.32
93	Toledo	101.00	Mississippi St.	105.71	Pacific	103.29
94	Utah St.	100.54	Pacific	105.67	Wyoming	103.26
95	Middle Tenn. St.	99.80	Southern Miss.	105.50	St. Joseph's (Pa.)	103.24
96	Delaware	99.35	Rice	105.32	Mo.-Kansas City	103.23
97	James Madison	98.88	Xavier (Ohio)	105.31	Notre Dame	103.22
98	Cincinnati	98.70	California	105.14	E. Kentucky	103.14
99	NE. Louisiana	98.45	Hawaii	104.84	Oklahoma St.	102.71
100	Holy Cross	98.33	Long Beach St.	104.80	Illinois	102.70
101	Colorado St.	98.27	W. Kentucky	104.57	Old Dominion	102.69
102	Ball St.	98.11	Utah St.	104.40	Minnesota	102.69
103	Temple	98.01	Ball St.	104.38	Mississippi St.	102.54
104	William & Mary	98.00	Texas Tech	104.05	Arizona	102.38

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
105	SW Missouri St.	97.83	South Alabama	104.01	Illinois St.	102.23
106	Citadel	97.75	Murray St.	103.99	Maine	102.23
107	Oregon St.	97.66	South Carolina	103.76	SW Texas St.	102.19
108	Appalachian St.	97.41	New Orleans	103.70	Northwestern St.	102.18
109	Weber St.	97.28	W. Michigan	103.55	Seton Hall	102.16
110	Army	97.20	Northwestern	103.40	Miami (Ohio)	102.13
111	McNeese St.	96.91	Ohio U.	103.28	Bradley	102.07
112	SW Texas St.	96.58	Duquesne	103.14	St. Peter's	101.98
113	W. Michigan	96.46	Dayton	103.11	Montana St.	101.87
114	Idaho	96.15	Manhattan	103.10	Cal St.-Sacramento	101.78
115	Tn.-Chattanooga	96.11	Cal St.-Fullerton	103.06	Cal St.-Fullerton	101.72
116	W. Illinois	95.66	S. Illinois	103.06	Cent. Michigan	101.62
117	Sam Houston St.	95.63	Tn.-Chattanooga	102.76	Texas-Arlington	101.61
118	Louisville	95.51	Mo.-Kansas City	102.72	Kent	101.58
119	Cent. Florida	95.32	Georgia Southern	102.69	Richmond	101.57
120	New Hampshire	95.24	St. Joseph's (Pa.)	102.65	Marquette	101.56
121	SW Louisiana	95.19	Mississippi	102.52	Fresno St.	101.41
122	Northwestern St.	95.17	Tulsa	102.45	Alcorn St.	101.25
123	Montana	94.75	Nevada	102.32	Virginia Commonwealth	101.13
124	Southern Meth.	94.06	Arkansas St.	102.11	Michigan	101.09
125	Tulane	93.89	Virginia Commonwealth	102.08	San Diego	101.02

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
126	Pacific	93.79	Washington	101.98	East Carolina	100.97
127	Akron	93.61	Siena	101.60	Tn.-Chattanooga	100.88
128	E. Michigan	93.26	Fresno St.	101.51	Villanova	100.83
129	Illinois St.	93.19	Delaware	101.46	Rice	100.67
130	N. Carolina A&T	92.70	Gonzaga	101.44	Portland	100.65
131	Lehigh	92.43	George Washington	101.37	Detroit	100.62
132	Navy	91.67	Colorado St.	101.27	St. Bonaventure	100.62
133	E. Illinois	91.36	Baylor	101.23	Idaho	100.52
134	Liberty	90.06	Illinois St.	101.22	Youngstown St.	100.51
135	Delaware St.	89.92	Bowling Green	101.13	Butler	100.39
136	Massachusetts	89.43	Southern Utah	101.01	Valparaiso	100.31
137	Jackson St.	89.27	Santa Clara	100.99	Temple	100.28
138	Alcorn St.	88.31	Loyola (Ill.)	100.92	Mercer	100.27
139	S. Illinois	88.22	Virginia Tech	100.47	James Madison	100.14
140	New Mexico	88.00	Fordham	100.42	Wake Forest	100.13
141	Dartmouth	87.96	Weber St.	100.31	South Florida	100.10
142	Florida A&M	87.84	Furman	100.27	Memphis	100.04
143	Indiana St.	87.80	San Francisco	100.19	Drake	99.87
144	N. Illinois	87.42	Indiana St.	100.16	New Hampshire	99.70
145	Kent	87.42	Ill.-Chicago	99.77	Syracuse	99.68
146	Ohio U.	87.18	Loyola (Md.)	99.76	UTEP	99.64

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
147	Nicholls St.	86.72	Pennsylvania	99.69	Fordham	99.32
148	New Mexico St.	86.65	Detroit	99.55	Wis.-Milwaukee	99.32
149	E. Washington	86.24	Holy Cross	99.40	Pittsburgh	99.30
150	UNLV	85.25	Loyola Marymount	99.27	Ohio U.	99.28
151	Long Beach St.	85.00	Lamar	99.11	Fairfield	99.17
152	Tennessee Tech	84.75	Towson St.	99.09	NE. Louisiana	99.15
153	Texas Southern	84.56	Miami (Fla.)	98.94	Baylor	99.14
154	Boston U.	84.54	Wis.-Milwaukee	98.78	Weber St.	99.13
155	W. Kentucky	84.48	Tennessee Tech	98.76	Cincinnati	99.11
156	W. Carolina	84.46	Kent	98.73	E. Michigan	99.11
157	Idaho St.	83.82	Middle Tenn. St.	98.73	SE Missouri St.	99.10
158	Princeton	83.31	Bucknell	98.67	Brown	99.06
159	Yale	83.04	Texas-San Antonio	98.67	Indiana St.	99.06
160	Grambling	83.03	E. Kentucky	98.65	Idaho St.	99.03
161	Arkansas St.	82.99	Charleston (S.C.)	98.47	Holy Cross	98.99
162	Miss. Valley St.	82.08	E. Illinois	98.14	Wichita St.	98.96
163	Montana St.	81.92	Southern Meth.	98.11	Murray St.	98.95
164	Va. Military	81.37	Old Dominion	97.82	Virginia Tech	98.90
165	Connecticut	80.99	Appalachian St.	97.66	Manhattan	98.85
166	Rhode Island	80.29	Iona	97.53	Evansville	98.81
167	Cornell	79.63	San Diego	97.41	Morehead St.	98.75

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
168	Harvard	79.36	Ark.-Little Rock	97.38	Tulane	98.67
169	S. Carolina St.	79.27	St. Louis	97.34	Mount St. Mary's (Md.)	98.67
170	Northeastern	79.15	UC Irvine	97.20	McNeese St.	98.62
171	Lafayette	79.07	Jacksonville	96.94	Furman	98.59
172	Tennessee St.	78.92	Cleveland St.	96.93	Buffalo	98.51
173	Colgate	78.85	Idaho	96.86	Jackson St.	98.46
174	Southern	78.81	NE. Louisiana	96.77	Loyola (Ill.)	98.43
175	Cal St.-Fullerton	78.63	N. Iowa	96.70	George Mason	98.40
176	North Texas	78.49	Niagara	96.52	Fairleigh Dickinson	98.35
177	Bethune-Cookman	78.40	Boise St.	96.48	Dayton	98.24
178	Maine	78.14	Robert Morris	96.45	Boston College	98.23
179	Austin Peay	78.06	Liberty	96.41	Iowa St.	98.23
180	Stephen F. Austin	77.75	Hofstra	96.35	Lafayette	98.15
181	Richmond	77.24	St. Mary's (Cal.)	96.32	Army	98.13
182	N. Arizona	75.90	E. Michigan	96.18	E. Washington	98.05
183	Morehead St.	75.76	Monmouth (N.J.)	95.98	Kansas St.	98.00
184	Fordham	75.40	Wichita St.	95.69	Marshall	97.86
185	E. Tennessee St.	74.37	Georgia St.	95.56	Georgia St.	97.67
186	Pennsylvania	73.60	Montana St.	95.50	Nevada	97.56
187	SE Missouri St.	73.40	American U.	95.42	Harvard	97.46
188	Towson St.	72.96	North Texas	95.38	Cent. Florida	97.46

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
189	Columbia	70.05	N. Illinois	95.34	N.C.-Greensboro	97.43
190	Brown	69.92	N.C.-Wilmington	95.32	E. Illinois	97.38
191	Murray St.	68.90	Yale	95.05	North Texas	97.31
192	Howard	66.94	Drexel	94.92	South Alabama	97.25
193	Bucknell	66.88	Cent. Michigan	94.81	Gonzaga	97.22
194	Morgan St.	60.77	Texas-Arlington	94.78	Siena	97.21
195	Prairie View A&M	41.36	Wright St.	94.57	Canisius	97.06
196			Creighton	94.50	Radford	97.01
197			Air Force	94.27	S. Carolina St.	96.97
198			Fairfield	94.09	American U.	96.94
199			Texas A&M	94.07	Georgia Southern	96.79
200			Oregon	93.87	Colorado St.	96.76
201			Columbia	93.85	W. Illinois	96.73
202			Miss. Valley St.	93.65	Princeton	96.68
203			Vermont	93.62	Dartmouth	96.65
204			Maine	93.59	Charleston (S.C.)	96.55
205			Morehead St.	93.52	Delaware	96.54
206			Southern	93.31	Boston U.	96.44
207			Radford	93.21	San Jose St.	96.41
208			Campbell	93.11	Duquesne	96.22
209			Mercer	93.08	Southern	96.13

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
210			Idaho St.	93.05	Miss. Valley St.	96.10
211			Portland	92.97	Rhode Island	95.92
212			Lehigh	92.93	Sam Houston St.	95.74
213			SE Missouri St.	92.79	SE Louisiana	95.65
214			Drake	92.48	Texas-Pan American	95.64
215			Akron	92.41	UC Irvine	95.63
216			Marshall	92.12	Brooklyn	95.62
217			East Carolina	91.99	Texas Christian	95.56
218			San Diego St.	91.94	Northeastern	95.55
219			Stephen F. Austin	91.70	Appalachian St.	95.45
220			St. Bonaventure	91.62	Tennessee St.	95.33
221			Toledo	91.40	Cleveland St.	95.23
222			Bradley	91.32	Texas-San Antonio	95.22
223			Texas Southern	91.24	N. Iowa	95.07
224			W. Illinois	91.12	Pennsylvania	94.94
225			San Jose St.	91.09	Hartford	94.90
226			Cent. Florida	90.97	Campbell	94.68
227			Nicholls St.	90.90	Nicholls St.	94.62
228			Cal St.-Northridge	90.89	Drexel	94.61
229			St. Francis (N.Y.)	90.89	Md.-E. Shore	94.56
230			Lafayette	90.88	Austin Peay	94.53

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
231			Austin Peay	90.86	William & Mary	94.49
232			Jackson St.	90.77	Florida A&M	94.33
233			St. Peter's	90.73	E. Tennessee St.	94.28
234			Northeastern	90.33	Yale	94.22
235			Fairleigh Dickinson	90.32	Md.-Baltimore County	94.21
236			Wagner College	90.21	Ill.-Chicago	94.19
237			Rider	90.06	Towson St.	94.17
238			Colgate	89.98	N. Carolina A&T	94.02
239			Cornell	89.96	Wright St.	93.93
240			Alabama St.	89.84	Niagara	93.84
241			Marist	89.83	Grambling	93.80
242			Brown	89.76	NE Illinois	93.57
243			Davidson	89.55	Howard	93.41
244			Northwestern St.	88.94	Liberty	93.38
245			Navy	88.78	Wagner College	93.33
246			Alcorn St.	88.73	Loyola Marymount	93.26
247			W. Carolina	88.49	Massachusetts	93.18
248			E. Washington	88.42	Coppin St.	92.96
249			George Mason	88.40	Robert Morris	92.93
250			Canisius	88.21	Rider	92.68
251			Samford	88.16	Navy	92.64

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
252			William & Mary	88.08	N. Arizona	92.63
253			S. Carolina St.	88.01	Ball St.	92.59
254			Charleston Southern	88.00	Alabama St.	92.56
255			Howard	87.97	Bucknell	92.37
256			Md.-Baltimore County	87.95	Iona	92.34
257			Coastal Carolina	87.71	Southern Utah	92.24
258			Va. Military	87.63	Marist	92.20
259			Coppin St.	87.28	Texas Southern	92.13
260			Long Island U.	87.10	Bethune-Cookman	92.09
261			Florida A&M	87.09	W. Michigan	92.05
262			Citadel	86.93	Long Island U.	91.92
263			Florida Int'l	86.83	W. Carolina	91.75
264			SW Texas St.	86.81	Cent. Connecticut St.	91.66
265			Stetson	86.01	Stetson	91.56
266			Valparaiso	85.88	Columbia	91.55
267			N. Carolina A&T	85.85	Hofstra	91.43
268			SE Louisiana	85.61	St. Francis (Pa.)	91.38
269			Dartmouth	85.31	Akron	91.36
270			NE Illinois	85.25	Cornell	91.31
271			Boston U.	85.13	Monmouth (N.J.)	91.30
272			St. Francis (Pa.)	85.06	Loyola (Md.)	91.25

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
273			Tennessee St.	84.56	Delaware St.	90.96
274			Centenary (La.)	84.55	N.C.-Wilmington	90.89
275			Hartford	84.49	SW Louisiana	90.77
276			Texas-Pan American	84.45	Morgan St.	90.75
277			Army	83.61	New Mexico	90.29
278			Harvard	83.36	Winthrop	90.06
279			N.C.-Greensboro	83.22	Colgate	90.05
280			McNeese St.	83.16	St. Louis	89.73
281			Mount St. Mary's (Md.)	83.16	Chicago St.	89.61
282			N.C.-Asheville	82.93	N.C.-Asheville	89.49
283			New Hampshire	82.84	Cal St.-Northridge	89.45
284			Chicago St.	82.25	Coastal Carolina	88.06
285			Cal St.-Sacramento	81.23	Lehigh	86.77
286			N. Arizona	80.61	St. Francis (N.Y.)	85.54
287			Youngstown St.	80.56	Charleston Southern	84.22
288			Delaware St.	79.62	Prairie View A&M	82.39
289			Winthrop	79.06		
290			Cent. Connecticut St.	77.90		
291			Grambling	77.71		
292			Brooklyn	76.99		
293			Sam Houston St.	76.39		

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	FB 1991		MBK 1991-1992		WBK 1991-1992	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
294			Morgan St.	71.29		
295			Bethune-Cookman	70.72		
296			Buffalo	68.71		
297			Md.-E. Shore	66.86		
298			Prairie View A&M	61.69		

Table 50: 1992-1993 Final Ratings

	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Florida St.	142.66	Kentucky	129.25	Tennessee	115.39
2	Notre Dame	139.31	North Carolina	129.11	Stanford	114.79
3	Nebraska	138.79	Indiana	125.66	Iowa	114.58
4	Michigan	137.06	Duke	124.02	Texas Tech	114.51
5	Alabama	135.47	Cincinnati	122.65	Vanderbilt	114.16
6	Miami (Fla.)	134.39	Michigan	121.85	Virginia	113.40
7	Washington	134.20	Seton Hall	121.21	Ohio St.	113.13
8	Stanford	131.38	Kansas	121.17	Penn St.	112.75
9	Georgia	130.91	Arizona	120.84	Maryland	112.39
10	Penn St.	128.11	Vanderbilt	119.71	Colorado	111.62
11	Arizona	127.36	Arkansas	118.89	Southern Cal	111.57
12	Tennessee	127.31	Iowa	118.08	Arizona St.	111.12
13	N. Carolina St.	127.12	Florida St.	117.72	Louisiana Tech	111.05
14	Texas A&M	126.75	Iowa St.	117.55	W. Kentucky	110.82
15	Syracuse	126.64	Wake Forest	117.26	Texas	110.80
16	Colorado	126.43	Minnesota	117.20	Auburn	109.94
17	Ohio St.	126.13	Oklahoma	115.30	California	109.71
18	Florida	124.96	W. Kentucky	115.27	Northwestern	109.57
19	Southern Cal	124.80	Louisville	115.05	Nebraska	109.49
20	Arizona St.	124.79	Providence	115.01	North Carolina	109.39

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
21	Virginia	124.53	Georgetown	114.56	SW Missouri St.	109.19
22	Fresno St.	122.51	St. John's	114.35	Washington	109.16
23	Kansas	122.36	Temple	114.24	Alabama	108.97
24	Brigham Young	122.06	Virginia	114.24	Clemson	108.90
25	Oklahoma	121.44	Oklahoma St.	114.11	Kansas	108.89
26	Washington St.	121.13	Massachusetts	113.94	Kentucky	108.62
27	Memphis	121.03	Marquette	113.84	Bowling Green	108.24
28	Mississippi	120.95	Michigan St.	113.70	Miami (Fla.)	108.19
29	Oregon	120.74	California	113.50	Stephen F. Austin	108.19
30	California	120.53	Georgia Tech	113.48	UCLA	108.14
31	Baylor	119.60	Missouri	113.19	DePaul	107.91
32	Mississippi St.	119.46	Memphis	113.19	Florida	107.64
33	North Carolina	119.38	Syracuse	112.64	Oklahoma St.	107.62
34	West Virginia	119.27	Georgia	112.56	Oregon St.	107.45
35	Boston College	119.14	Washington St.	112.44	Georgia	107.42
36	Clemson	118.37	Brigham Young	112.32	Mississippi	107.26
37	Wake Forest	117.43	UCLA	112.09	Purdue	107.22
38	Hawaii	117.32	Utah	112.07	Hawaii	107.19
39	Auburn	117.08	Boston College	111.99	Montana	107.17
40	Georgia Tech	116.15	Ala.-Birmingham	111.90	Arizona	107.06
41	Iowa	116.09	West Virginia	111.76	Arkansas St.	106.93

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
42	UCLA	115.71	Ohio St.	111.72	Georgia Tech	106.92
43	Rutgers	115.41	Purdue	111.71	N. Carolina St.	106.90
44	Michigan St.	115.15	Illinois	111.63	Creighton	106.81
45	Arkansas	115.08	Clemson	111.61	Florida St.	106.81
46	Marshall	114.47	LSU	111.55	Missouri	106.80
47	Illinois	114.44	Xavier (Ohio)	111.43	UNLV	106.73
48	Utah	114.44	Florida	111.35	Florida Int'l	106.51
49	Texas	114.39	George Washington	111.34	Connecticut	106.48
50	Virginia Tech	113.77	New Orleans	111.12	N. Illinois	106.20
51	Maryland	113.73	Connecticut	110.89	Louisville	106.20
52	Wisconsin	113.70	Nebraska	110.28	Old Dominion	106.16
53	San Diego St.	113.32	Arizona St.	110.13	St. Joseph's (Pa.)	106.16
54	Vanderbilt	113.31	Auburn	110.06	Vermont	106.05
55	Southern Miss.	113.26	Evansville	109.91	N.C. Charlotte	106.05
56	South Carolina	113.17	Alabama	109.58	Santa Clara	106.02
57	Missouri	113.13	New Mexico	109.56	Southern Miss.	105.93
58	Iowa St.	112.82	Kansas St.	109.53	Tennessee Tech	105.89
59	Indiana	112.36	UNLV	109.19	S. Illinois	105.89
60	Louisville	112.30	Pittsburgh	109.11	Brigham Young	105.80
61	Houston	111.94	James Madison	108.90	Northwestern St.	105.79
62	Purdue	111.53	Maryland	108.63	Minnesota	105.68

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
63	Delaware	111.33	Virginia Commonwealth	108.54	Oregon	105.67
64	Duke	111.33	Villanova	108.49	George Washington	105.46
65	Rice	111.21	Rhode Island	108.39	Boise St.	105.44
66	Texas Tech	110.74	Oregon St.	108.26	San Diego St.	105.39
67	Bowling Green	110.25	Southern Cal	108.22	Rutgers	105.37
68	Kansas St.	109.23	Houston	108.05	Wake Forest	105.32
69	LSU	109.21	S. Illinois	108.02	Utah	105.31
70	Louisiana Tech	109.07	NE. Louisiana	107.33	New Orleans	105.26
71	Kentucky	108.93	SW Missouri St.	107.23	Georgetown	105.26
72	Air Force	108.26	Wisconsin	107.21	Xavier (Ohio)	105.25
73	N. Iowa	108.19	Tn.-Chattanooga	106.85	Butler	105.20
74	Toledo	107.94	Long Beach St.	106.68	Indiana	105.15
75	Oklahoma St.	107.45	Rutgers	106.64	SW Texas St.	104.70
76	Wyoming	107.41	New Mexico St.	106.59	Arkansas	104.67
77	Idaho	106.71	Tennessee	106.58	South Carolina	104.46
78	Citadel	105.94	St. Louis	106.53	Illinois	104.42
79	Minnesota	105.80	Tulane	106.21	Kent	104.34
80	Cent. Michigan	105.75	Old Dominion	106.07	Montana St.	104.23
81	Middle Tenn. St.	105.61	UC Santa Barbara	105.88	Virginia Tech	104.14
82	Youngstown St.	105.16	Colorado	105.77	Marquette	104.09
83	Colorado St.	105.00	Pennsylvania	105.70	Southern Meth.	104.06

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
84	Tulsa	104.79	N.C. Charlotte	105.63	Pacific	104.02
85	Oregon St.	104.72	St. Joseph's (Pa.)	105.34	Duke	103.77
86	Utah St.	104.55	Southern Meth.	105.27	Middle Tenn. St.	103.57
87	San Jose St.	104.26	South Alabama	105.24	Notre Dame	103.56
88	NE. Louisiana	104.17	DePaul	105.20	Villanova	103.49
89	New Mexico	104.02	Lamar	105.17	Washington St.	103.44
90	East Carolina	103.48	Miami (Ohio)	105.16	Seton Hall	103.27
91	Cincinnati	103.44	Rice	105.03	Texas A&M	103.22
92	Southern Meth.	103.42	Washington	104.81	UTEP	103.15
93	Texas Christian	103.09	Miami (Fla.)	104.80	Mississippi St.	103.14
94	Northwestern	103.03	UTEP	104.68	Miami (Ohio)	103.14
95	Miami (Ohio)	101.82	Southern	104.53	Virginia Commonwealth	103.10
96	Pittsburgh	101.36	Arkansas St.	104.42	NE. Louisiana	102.96
97	Army	101.11	South Carolina	104.41	Michigan St.	102.81
98	Nevada	100.84	Pacific	104.10	Wis.-Green Bay	102.80
99	Villanova	100.77	SW Louisiana	103.76	San Diego	102.77
100	Akron	100.75	Pepperdine	103.70	UC Santa Barbara	102.75
101	Pacific	100.63	Southern Miss.	103.47	Pittsburgh	102.54
102	W. Michigan	100.04	Niagara	103.47	Pepperdine	102.42
103	Georgia Southern	100.03	Illinois St.	103.26	Oklahoma	102.31
104	N. Illinois	99.68	Gonzaga	103.24	Tulane	102.31

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
105	Appalachian St.	99.23	Texas Tech	103.16	La Salle	102.22
106	W. Carolina	98.24	Richmond	103.12	Georgia Southern	102.21
107	Furman	98.23	Ball St.	103.00	Providence	102.13
108	McNeese St.	97.95	Manhattan	102.89	Mo.-Kansas City	101.92
109	Richmond	97.80	Santa Clara	102.78	Toledo	101.89
110	Samford	97.65	N. Carolina St.	102.73	LSU	101.81
111	UTEP	97.35	Holy Cross	102.67	San Francisco	101.80
112	William & Mary	97.35	Northwestern	102.53	New Mexico St.	101.77
113	New Mexico St.	96.62	Colorado St.	102.52	Baylor	101.77
114	Tulane	96.58	Hawaii	102.33	Furman	101.57
115	Navy	96.45	Duquesne	102.16	Illinois St.	101.40
116	Dartmouth	96.25	Oregon	102.10	Cent. Michigan	101.33
117	Ball St.	96.04	Texas	101.84	Houston	101.27
118	E. Washington	95.76	Wright St.	101.71	St. John's	101.25
119	SW Missouri St.	95.15	Baylor	101.64	New Hampshire	101.23
120	New Hampshire	95.01	Cal St.-Fullerton	101.57	Wyoming	101.22
121	Massachusetts	93.99	Detroit	101.40	Wisconsin	101.13
122	W. Illinois	93.83	Notre Dame	101.03	Wichita St.	101.11
123	Grambling	93.62	Penn St.	101.02	Cal St.-Sacramento	101.10
124	Montana	92.60	Tulsa	100.88	Memphis	101.00
125	Weber St.	92.60	La Salle	100.73	E. Kentucky	100.93

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
126	Illinois St.	92.52	Siena	100.54	Ala.-Birmingham	100.84
127	UNLV	92.21	N.C.-Wilmington	100.53	Evansville	100.75
128	Connecticut	92.08	Bradley	100.47	Tn.-Chattanooga	100.73
129	Cent. Florida	91.47	East Carolina	100.35	Harvard	100.63
130	SW Texas St.	91.29	Idaho	100.21	Holy Cross	100.56
131	Princeton	90.90	Mississippi St.	100.18	West Virginia	100.55
132	Ohio U.	90.84	Boise St.	100.15	Rhode Island	100.52
133	Temple	90.77	Jackson St.	99.99	Drake	100.51
134	E. Illinois	90.67	Weber St.	99.98	Youngstown St.	100.45
135	James Madison	90.66	Delaware	99.72	Portland	100.41
136	Sam Houston St.	90.40	Drake	99.71	Tennessee St.	100.38
137	Lafayette	89.98	Stanford	99.70	St. Peter's	100.37
138	Northwestern St.	89.64	Bucknell	99.70	Dayton	100.36
139	Alcorn St.	89.54	Northeastern	99.69	James Madison	100.27
140	E. Kentucky	89.03	Texas A&M	99.65	St. Mary's (Cal.)	100.15
141	Maine	88.72	Wis.-Milwaukee	99.64	Kansas St.	100.02
142	Cornell	88.40	American U.	99.54	George Mason	99.90
143	Jackson St.	88.32	Butler	99.54	Detroit	99.90
144	Northeastern	87.82	Wyoming	99.48	Rice	99.86
145	SW Louisiana	87.72	Tennessee St.	99.20	Colorado St.	99.77
146	North Texas	87.53	Utah St.	99.17	Brown	99.75

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
147	Pennsylvania	87.33	South Florida	99.11	Texas Christian	99.70
148	W. Kentucky	86.62	Mo.-Kansas City	99.06	Loyola Marymount	99.60
149	Liberty	86.38	Indiana St.	99.04	Wis.-Milwaukee	99.59
150	Indiana St.	86.05	W. Michigan	98.98	Gonzaga	99.59
151	Kent	85.94	Cornell	98.73	Boston College	99.58
152	Boise St.	85.70	E. Tennessee St.	98.58	Valparaiso	99.49
153	S. Illinois	83.66	Iona	98.42	Lamar	99.36
154	Holy Cross	83.14	Mississippi	98.39	Cincinnati	99.35
155	E. Michigan	82.61	St. Bonaventure	98.35	Long Beach St.	99.07
156	N. Arizona	82.19	Cleveland St.	97.97	Mount St. Mary's (Md.)	99.01
157	Cal St.-Fullerton	82.16	Georgia Southern	97.97	Texas-Arlington	99.00
158	Boston U.	82.16	San Diego	97.92	W. Michigan	99.00
159	Howard	82.00	Drexel	97.91	East Carolina	99.00
160	Tennessee Tech	81.84	Wichita St.	97.71	McNeese St.	98.98
161	Stephen F. Austin	81.76	San Francisco	97.62	Idaho	98.96
162	Lehigh	81.62	Virginia Tech	97.59	Michigan	98.89
163	Arkansas St.	80.97	Ill.-Chicago	97.40	Appalachian St.	98.81
164	Florida A&M	80.60	William & Mary	97.20	Massachusetts	98.73
165	Alabama St.	80.36	Fresno St.	97.10	Ohio U.	98.72
166	Montana St.	80.34	Wis.-Green Bay	97.08	St. Bonaventure	98.61
167	Va. Military	79.86	E. Kentucky	96.95	Idaho St.	98.54

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
168	S. Carolina St.	79.52	Creighton	96.91	N. Iowa	98.50
169	Harvard	78.53	Ark.-Little Rock	96.68	Northeastern	98.45
170	N. Carolina A&T	78.49	Columbia	96.63	Fresno St.	98.41
171	Tn.-Chattanooga	78.35	Coppin St.	96.55	Syracuse	98.31
172	Tennessee St.	77.93	Princeton	96.52	Marshall	98.17
173	Yale	77.90	Davidson	96.46	N.C.-Greensboro	98.14
174	Towson St.	77.63	Ohio U.	96.18	Boston U.	98.10
175	Delaware St.	77.52	Coastal Carolina	96.14	E. Washington	98.02
176	Texas Southern	76.08	Bowling Green	96.13	Bradley	98.01
177	Colgate	75.78	E. Michigan	96.11	William & Mary	97.98
178	Idaho St.	75.72	Murray St.	95.77	Loyola (Md.)	97.96
179	Southern	75.68	Montana	95.67	Yale	97.92
180	Rhode Island	75.55	San Jose St.	95.63	Ill.-Chicago	97.87
181	Fordham	74.64	N. Iowa	95.56	SE Missouri St.	97.87
182	E. Tennessee St.	74.23	Hartford	95.14	American U.	97.86
183	Columbia	72.53	Southern Utah	94.99	Southern Utah	97.77
184	Nicholls St.	72.40	UC Irvine	94.96	Indiana St.	97.77
185	SE Missouri St.	72.13	SW Texas St.	94.87	Princeton	97.75
186	Tenn.-Martin	71.81	Miss. Valley St.	94.87	South Florida	97.71
187	Bethune-Cookman	69.99	Rider	94.86	Delaware	97.68
188	Bucknell	67.93	Furman	94.86	Niagara	97.66

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
189	Miss. Valley St.	67.39	Toledo	94.83	Fairfield	97.58
190	Brown	66.88	Nevada	94.82	Temple	97.57
191	Austin Peay	66.84	Marshall	94.79	South Alabama	97.56
192	Morehead St.	65.21	Kent	94.74	North Texas	97.46
193	Murray St.	62.83	Charleston (S.C.)	94.61	S. Carolina St.	97.44
194	Morgan St.	54.43	Colgate	94.56	Duquesne	97.25
195	Prairie View A&M	43.95	Dayton	94.48	Fordham	97.22
196			Valparaiso	94.37	Maine	97.20
197			Fairfield	94.18	Hartford	97.00
198			McNeese St.	94.15	Southern	96.98
199			Wagner College	94.10	Richmond	96.97
200			Idaho St.	93.88	Florida A&M	96.96
201			Northwestern St.	93.66	Lafayette	96.90
202			San Diego St.	93.59	Morehead St.	96.84
203			Texas-San Antonio	93.43	Iona	96.67
204			Appalachian St.	93.32	Loyola (Ill.)	96.66
205			Loyola (Ill.)	93.25	Siena	96.63
206			Canisius	93.13	Georgia St.	96.55
207			Tennessee Tech	92.97	Alcorn St.	96.52
208			Florida Int'l	92.92	Radford	96.12
209			Nicholls St.	92.83	Cal St.-Fullerton	96.11

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
210			St. Mary's (Cal.)	92.82	Wright St.	95.99
211			Samford	92.79	Fairleigh Dickinson	95.88
212			Fordham	92.65	Rider	95.88
213			SE Missouri St.	92.59	Sam Houston St.	95.85
214			Towson St.	92.53	Weber St.	95.83
215			Yale	92.52	Canisius	95.83
216			Texas-Arlington	92.24	Charleston (S.C.)	95.62
217			Jacksonville	92.16	Coppin St.	95.52
218			Air Force	92.04	New Mexico	95.50
219			Alabama St.	92.03	Dartmouth	95.46
220			Dartmouth	92.01	San Jose St.	95.33
221			Mercer	91.95	Mercer	95.32
222			Texas Southern	91.76	Marist	95.21
223			Texas Christian	91.40	Manhattan	95.20
224			Stephen F. Austin	91.26	Nevada	95.08
225			George Mason	91.24	Murray St.	94.94
226			Montana St.	91.04	Texas-San Antonio	94.89
227			Stetson	90.65	Cleveland St.	94.81
228			Liberty	90.49	Wagner College	94.77
229			Cal St.-Northridge	90.44	Army	94.59
230			Georgia St.	90.42	SE Louisiana	94.58

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
231			Loyola Marymount	90.04	Bucknell	94.57
232			N. Illinois	89.99	UC Irvine	94.51
233			NE Illinois	89.98	E. Michigan	94.34
234			Monmouth (N.J.)	89.92	Liberty	94.24
235			Alcorn St.	89.77	Pennsylvania	94.24
236			Akron	89.46	Buffalo	94.24
237			St. Peter's	89.44	Iowa St.	94.22
238			Mount St. Mary's (Md.)	89.26	E. Tennessee St.	94.12
239			Louisiana Tech	89.03	Campbell	94.10
240			Middle Tenn. St.	88.96	Texas-Pan American	93.97
241			Md.-Baltimore County	88.90	Drexel	93.66
242			Citadel	88.82	Cornell	93.65
243			N. Arizona	88.77	Morgan St.	93.61
244			Grambling	88.76	Ball St.	93.57
245			Marist	88.62	Navy	93.31
246			E. Illinois	88.55	Towson St.	93.28
247			Hofstra	88.40	Md.-Baltimore County	93.25
248			Cent. Michigan	88.39	Austin Peay	93.19
249			Robert Morris	88.38	Stetson	93.10
250			SE Louisiana	88.26	Alabama St.	93.09
251			Portland	88.20	Robert Morris	92.93

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
252			Maine	87.90	Akron	92.91
253			W. Illinois	87.61	W. Carolina	92.90
254			North Texas	87.40	Grambling	92.80
255			Radford	87.37	Cal St.-Northridge	92.67
256			Fairleigh Dickinson	87.19	SW Louisiana	92.64
257			St. Francis (Pa.)	87.11	NE Illinois	92.63
258			E. Washington	87.06	St. Francis (Pa.)	92.57
259			Long Island U.	86.82	St. Louis	92.05
260			Winthrop	86.78	Chicago St.	91.86
261			Cent. Florida	86.74	Miss. Valley St.	91.86
262			S. Carolina St.	86.63	N.C.-Wilmington	91.81
263			W. Carolina	86.42	Nicholls St.	91.63
264			New Hampshire	86.40	Monmouth (N.J.)	91.54
265			Austin Peay	86.19	N. Arizona	91.51
266			St. Francis (N.Y.)	86.19	Jackson St.	91.49
267			Campbell	86.13	Cent. Connecticut St.	91.45
268			N. Carolina A&T	85.96	Tenn.-Martin	91.45
269			N.C.-Greensboro	85.95	Texas Southern	91.10
270			Navy	85.57	N. Carolina A&T	91.08
271			Lafayette	85.26	W. Illinois	90.92
272			Vermont	85.16	Bethune-Cookman	90.88

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
273			Brown	85.09	Columbia	90.86
274			Loyola (Md.)	84.68	E. Illinois	90.77
275			Tenn.-Martin	84.66	Cent. Florida	90.63
276			Lehigh	84.65	Delaware St.	90.28
277			Morehead St.	84.63	Coastal Carolina	90.20
278			Centenary (La.)	84.48	Hofstra	89.73
279			Harvard	84.44	Long Island U.	89.57
280			Texas-Pan American	84.33	Charleston Southern	89.37
281			Sam Houston St.	83.70	Howard	89.23
282			Boston U.	83.42	Winthrop	88.67
283			Cal St.-Sacramento	82.49	Davidson	88.57
284			Charleston Southern	82.45	Colgate	88.51
285			Delaware St.	82.11	Md.-E. Shore	87.96
286			Howard	81.62	Lehigh	87.63
287			Va. Military	81.55	St. Francis (N.Y.)	85.86
288			Morgan St.	81.23	N.C.-Asheville	84.05
289			Buffalo	81.15	Prairie View A&M	82.15
290			Youngstown St.	80.79		
291			Army	80.71		
292			Florida A&M	80.19		
293			Md.-E. Shore	78.53		

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	FB 1992		MBK 1992-1993		WBK 1992-1993	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
294			Cent. Connecticut St.	78.22		
295			Chicago St.	77.70		
296			Bethune-Cookman	75.91		
297			N.C.-Asheville	75.14		
298			Prairie View A&M	69.59		

Table 51: 1993-1994 Final Ratings

	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Florida St.	151.06	Arizona	123.09	Tennessee	115.93
2	Tennessee	143.66	Arkansas	122.63	Penn St.	114.81
3	Nebraska	142.50	Purdue	120.93	Stanford	114.61
4	Florida	141.92	Connecticut	120.93	Purdue	114.26
5	Notre Dame	139.66	North Carolina	120.31	North Carolina	113.55
6	Texas A&M	139.65	Kansas	120.31	Connecticut	112.71
7	Michigan	137.13	Kentucky	120.10	Vanderbilt	112.67
8	UCLA	136.50	Duke	119.86	Texas Tech	112.42
9	Penn St.	134.83	Minnesota	119.14	Louisiana Tech	112.37
10	Oklahoma	134.68	Providence	118.82	Southern Cal	112.35
11	Arizona	133.49	Illinois	118.06	Alabama	112.23
12	Southern Cal	132.43	Michigan	118.02	SW Missouri St.	111.74
13	Ohio St.	132.06	Florida	117.10	Washington	110.78
14	Wisconsin	131.98	Louisville	117.04	Virginia	110.72
15	Colorado	131.62	Georgetown	117.00	Colorado	110.35
16	Washington	130.66	Oklahoma St.	116.81	Iowa	110.06
17	Alabama	130.55	Massachusetts	116.56	Seton Hall	109.92
18	Miami (Fla.)	130.46	Syracuse	116.49	Montana	109.75
19	Auburn	129.55	Texas	116.44	Florida Int'l	109.31
20	Arizona St.	128.24	Michigan St.	116.27	Creighton	109.26

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
21	West Virginia	128.17	Cincinnati	116.20	Mississippi	109.24
22	California	127.14	Missouri	116.19	Northwestern	109.13
23	Boston College	127.11	Temple	116.06	Kansas	109.00
24	Georgia	126.18	Boston College	115.87	Maryland	109.00
25	Virginia Tech	125.22	Marquette	115.82	W. Kentucky	108.79
26	Washington St.	125.11	Ala.-Birmingham	114.68	Southern Miss.	108.75
27	Louisville	125.11	Indiana	114.67	Texas	108.73
28	North Carolina	125.01	Wake Forest	114.43	Ohio St.	108.70
29	Kansas St.	124.21	Wisconsin	114.22	Auburn	108.46
30	Texas Tech	123.80	Nebraska	113.97	Clemson	108.43
31	Oregon	123.47	Maryland	113.96	Oregon	108.26
32	Fresno St.	122.45	Seton Hall	113.56	San Diego St.	108.26
33	Kansas	121.89	California	113.47	Oregon St.	108.08
34	Illinois	121.37	Vanderbilt	113.18	UCLA	108.02
35	Mississippi	121.27	UCLA	113.05	Rutgers	107.99
36	Virginia	120.81	Washington St.	113.03	Florida	107.99
37	Michigan St.	120.73	Villanova	112.95	Minnesota	107.95
38	Indiana	120.26	Iowa St.	112.85	Boise St.	107.83
39	Texas	119.97	St. Louis	112.34	Indiana	107.58
40	Stanford	119.08	Alabama	112.28	Georgia	107.46
41	Oregon St.	117.83	Ohio U.	111.78	Kentucky	107.43

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
42	Arkansas	117.68	Iowa	111.04	Notre Dame	107.28
43	Mississippi St.	117.13	Tulsa	110.97	Oklahoma St.	107.16
44	Memphis	116.89	Northwestern	110.95	Hawaii	107.03
45	Kentucky	115.73	Georgia Tech	110.71	Oklahoma	106.89
46	Brigham Young	115.73	Ohio St.	110.69	George Washington	106.87
47	San Diego St.	115.68	DePaul	110.34	Bowling Green	106.65
48	South Carolina	115.48	Virginia	110.20	Texas A&M	106.58
49	Idaho	115.32	Florida St.	110.13	Arizona	106.57
50	Utah	114.70	Clemson	110.11	Old Dominion	106.46
51	Iowa St.	114.22	Pittsburgh	110.10	Duke	106.35
52	New Mexico	113.90	Wis.-Green Bay	110.02	Nebraska	106.13
53	Montana	113.90	Tulane	110.00	UNLV	106.13
54	Colorado St.	113.73	Georgia	109.58	Ala.-Birmingham	106.00
55	Clemson	113.56	Stanford	109.22	Pittsburgh	105.71
56	N. Carolina St.	113.33	Xavier (Ohio)	109.02	Marquette	105.71
57	NE. Louisiana	113.15	Mississippi St.	108.88	Wisconsin	105.70
58	Oklahoma St.	112.93	George Washington	108.87	N. Illinois	105.70
59	Wyoming	112.74	Arizona St.	108.85	Santa Clara	105.65
60	Georgia Tech	112.42	Virginia Tech	108.80	Arkansas	105.51
61	Purdue	112.36	Pepperdine	108.76	St. Joseph's (Pa.)	105.47
62	LSU	112.23	St. John's	108.55	Toledo	105.33

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
63	Troy St.	111.90	Auburn	108.33	Stephen F. Austin	105.27
64	Syracuse	111.53	Kansas St.	108.23	Arkansas St.	105.13
65	Missouri	111.52	Siena	108.04	Drake	104.99
66	Rice	111.39	Southern Miss.	107.92	Kent	104.92
67	Iowa	111.10	Oklahoma	107.88	South Carolina	104.82
68	Hawaii	111.08	New Mexico	107.86	Virginia Tech	104.80
69	Rutgers	110.56	S. Illinois	107.65	Providence	104.68
70	Cincinnati	110.51	Penn St.	107.55	Gonzaga	104.62
71	Baylor	110.37	Gonzaga	107.49	Southern Meth.	104.56
72	Youngstown St.	109.78	Brigham Young	107.04	Michigan St.	104.56
73	Tulsa	109.15	Manhattan	106.90	Memphis	104.25
74	Minnesota	108.92	N.C. Charlotte	106.86	Grambling	104.25
75	Northwestern	108.63	W. Kentucky	106.84	Rhode Island	104.17
76	Southern Meth.	108.19	West Virginia	106.62	Wis.-Green Bay	104.10
77	McNeese St.	107.44	Pennsylvania	106.21	New Mexico St.	103.94
78	Dayton	107.33	Memphis	106.18	SW Texas St.	103.83
79	Vanderbilt	107.23	Old Dominion	106.13	Illinois	103.78
80	Bowling Green	106.89	Duquesne	105.30	Wichita St.	103.75
81	William & Mary	106.28	New Mexico St.	105.19	Kansas St.	103.70
82	Utah St.	105.64	Virginia Commonwealth	105.19	Missouri	103.57
83	Air Force	105.58	Evansville	105.12	LSU	103.50

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
84	Boston U.	105.43	Notre Dame	104.99	Butler	103.41
85	Duke	105.34	SW Louisiana	104.72	Xavier (Ohio)	103.31
86	Nevada	105.31	Miami (Ohio)	104.70	New Orleans	103.13
87	Southern Miss.	104.89	South Carolina	104.67	Brigham Young	102.94
88	Texas Christian	104.37	Ill.-Chicago	104.60	Georgia Tech	102.92
89	Marshall	104.31	LSU	104.58	Detroit	102.89
90	SW Louisiana	103.83	Southern Cal	104.39	NE. Louisiana	102.83
91	Stephen F. Austin	103.63	St. Joseph's (Pa.)	104.36	N. Carolina St.	102.77
92	E. Washington	103.61	Texas Tech	104.30	Villanova	102.76
93	Wake Forest	103.49	N. Iowa	104.25	W. Michigan	102.75
94	San Jose St.	103.45	Oregon	104.21	Miami (Ohio)	102.71
95	Cent. Florida	102.81	New Orleans	104.15	Middle Tenn. St.	102.60
96	Delaware	101.49	Charleston (S.C.)	104.02	Washington St.	102.53
97	W. Michigan	101.39	Illinois St.	104.00	Tulane	102.50
98	Georgia Southern	100.93	Santa Clara	103.99	SE Louisiana	102.49
99	Wagner College	100.79	Weber St.	103.95	Northwestern St.	102.48
100	James Madison	100.77	Fresno St.	103.60	Portland	102.48
101	Pittsburgh	100.76	San Francisco	103.47	Pepperdine	102.47
102	Ball St.	100.73	San Diego	103.34	Tennessee St.	102.44
103	Maryland	100.37	Princeton	103.25	Georgetown	102.38
104	Pacific	100.11	Rhode Island	103.17	S. Illinois	102.30

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
105			Bradley	103.17	St. Mary's (Cal.)	102.26
106	Cent. Michigan	100.00	Bowling Green	103.05	Montana St.	102.25
107	UC Davis	99.73	Texas A&M	103.00	George Mason	102.11
108	N. Iowa	99.09	Boise St.	102.87	Baylor	102.02
109	Army	98.67	Mississippi	102.78	DePaul	102.01
110	Weber St.	98.58	Drexel	102.60	Appalachian St.	101.97
111	Cal-Poly SLO	98.45	Coppin St.	102.57	Indiana St.	101.96
112	East Carolina	98.28	Butler	102.54	Houston	101.94
113	Montana St.	98.09	Pacific	102.35	Wake Forest	101.92
114	Houston	98.09	Hawaii	102.30	Boston College	101.91
115	New Hampshire	98.07	Tennessee	102.28	Utah	101.82
116	W. Kentucky	98.05	N. Carolina St.	102.18	Colorado St.	101.78
117	N. Arizona	97.83	Colorado St.	102.14	Alcorn St.	101.76
118	Iona	97.60	James Madison	101.98	La Salle	101.74
119	Illinois St.	97.23	Murray St.	101.93	Massachusetts	101.71
120	Massachusetts	97.13	Canisius	101.92	Louisville	101.66
121	Georgetown	96.94	Utah	101.87	Miami (Fla.)	101.58
122	Towson St.	96.79	Ball St.	101.86	Southern Utah	101.57
123	Canisius	96.53	Long Beach St.	101.75	Siena	101.55
124	Toledo	95.84	SW Texas St.	101.57	Rice	101.48
125	Navy	95.81	SW Missouri St.	101.48	California	101.42

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
126	E. Kentucky	95.76	Richmond	101.31	Vermont	101.35
127	San Diego	95.50	Rice	101.30	Ohio U.	101.35
128	Marist	95.50	Rutgers	101.29	Georgia Southern	101.24
129	Butler	95.46	Montana	101.27	Northeastern	101.16
130	North Texas	95.21	Wyoming	101.12	Texas-Arlington	101.01
131	Evansville	95.18	San Jose St.	101.10	E. Kentucky	101.00
132	Tulane	95.02	Detroit	100.98	Tennessee Tech	101.00
133	Howard	94.67	Idaho	100.97	UC Santa Barbara	100.99
134	St. John's	94.45	Idaho St.	100.76	Mississippi St.	100.96
135	UNLV	94.44	UNLV	100.68	South Florida	100.90
136	New Mexico St.	94.13	Valparaiso	100.54	Illinois St.	100.86
137	Cent. Connecticut St.	93.80	Davidson	100.41	San Francisco	100.76
138	Connecticut	93.79	Tn.-Chattanooga	100.39	Furman	100.72
139	Southern	93.69	Toledo	100.36	William & Mary	100.70
140	Ala.-Birmingham	93.52	Maine	100.31	Syracuse	100.65
141	UTEP	93.47	UTEP	100.23	James Madison	100.56
142	N. Illinois	92.73	St. Mary's (Cal.)	99.99	San Diego	100.55
143	St. Peter's	92.68	Colorado	99.96	Loyola (Md.)	100.54
144	Sam Houston St.	92.62	Rider	99.87	Maine	100.53
145	Cal St.-Northridge	92.60	Baylor	99.86	Bradley	100.53
146	Pennsylvania	92.54	Washington	99.76	Fairfield	100.42

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
147	Furman	92.42	Tennessee St.	99.61	St. John's	100.38
148	W. Carolina	92.31	La Salle	99.57	Pacific	100.38
149	Miami (Ohio)	92.19	E. Tennessee St.	99.55	UTEP	100.25
150	Hofstra	92.11	South Florida	99.54	N.C. Charlotte	100.24
151	SW Missouri St.	91.99	East Carolina	99.09	Brown	100.24
152	Akron	91.98	Arkansas St.	98.96	Arizona St.	99.93
153	Southern Utah	91.78	Drake	98.71	SE Missouri St.	99.90
154	Louisiana Tech	91.57	St. Bonaventure	98.65	Tn.-Chattanooga	99.82
155	Drake	91.40	Jacksonville	98.62	Wyoming	99.78
156	St. Mary's (Cal.)	91.14	Loyola (Md.)	98.57	Mount St. Mary's (Md.)	99.76
157	Arkansas St.	90.87	Utah St.	98.53	Loyola (Ill.)	99.74
158	N. Carolina A&T	90.67	Nicholls St.	98.33	St. Bonaventure	99.59
159	Northwestern St.	90.27	Hartford	98.24	W. Illinois	99.54
160	Indiana St.	89.53	South Alabama	97.77	Florida St.	99.54
161	St. Francis (Pa.)	89.30	N.C.-Wilmington	97.63	Long Beach St.	99.26
162	E. Michigan	89.22	E. Michigan	97.46	Cent. Michigan	99.24
163	Middle Tenn. St.	88.85	UC Santa Barbara	97.42	Fresno St.	99.23
164	Samford	88.85	Portland	97.04	Princeton	99.15
165	S. Carolina St.	88.60	Miami (Fla.)	97.03	E. Washington	99.12
166	Boise St.	88.33	Montana St.	96.94	Fordham	98.95
167	Princeton	88.28	Wagner College	96.80	Richmond	98.90

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
168	Ohio U.	88.20	Jackson St.	96.74	Dayton	98.76
169	Duquesne	87.58	Ark.-Little Rock	96.74	Duquesne	98.67
170	W. Illinois	87.49	N. Illinois	96.57	Yale	98.65
171	E. Illinois	87.27	N. Arizona	96.53	Lafayette	98.64
172	Dartmouth	87.17	NE. Louisiana	96.51	Niagara	98.62
173	Tennessee Tech	87.12	UC Irvine	96.48	NE Illinois	98.51
174	Grambling	87.04	W. Michigan	96.47	Iowa St.	98.47
175	Appalachian St.	86.94	Southern Utah	96.43	Michigan	98.47
176	Idaho St.	86.55	Houston	96.38	San Jose St.	98.45
177	Richmond	86.37	Dayton	96.38	Lamar	98.39
178	Nicholls St.	86.29	Kent	96.31	N. Arizona	98.32
179	Citadel	86.04	Texas Southern	96.29	Loyola Marymount	98.27
180	Northeastern	85.40	Oregon St.	96.29	New Hampshire	98.23
181	E. Tennessee St.	84.70	Georgia Southern	95.95	S. Carolina St.	98.22
182	Liberty	84.54	Appalachian St.	95.90	Cincinnati	98.16
183	Delaware St.	83.97	Cal St.-Fullerton	95.89	West Virginia	98.13
184	Cornell	83.36	Texas-Pan American	95.86	Miss. Valley St.	98.13
185	Cal St.-Sacramento	83.23	W. Carolina	95.79	Wis.-Milwaukee	98.12
186	SW Texas St.	82.94	Cleveland St.	95.48	Dartmouth	98.07
187	Alcorn St.	82.89	San Diego St.	95.48	North Texas	98.00
188	Valparaiso	82.63	Southern Meth.	95.47	Texas Christian	97.93

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
189	Lafayette	82.57	Nevada	95.02	Ill.-Chicago	97.64
190	Maine	81.08	St. Peter's	95.01	Pennsylvania	97.62
191	Kent	80.94	North Texas	94.97	Wright St.	97.48
192	Lehigh	80.33	Radford	94.93	Valparaiso	97.37
193	Jackson St.	80.14	E. Kentucky	94.82	Buffalo	97.28
194	Alabama St.	79.96	Delaware	94.77	Stetson	97.21
195	Miss. Valley St.	79.35	Lamar	94.41	Southern	97.15
196	Florida A&M	79.15	N.C.-Greensboro	94.37	Army	97.11
197	Buffalo	78.88	Mo.-Kansas City	94.16	Rider	97.03
198	S. Illinois	78.48	St. Francis (Pa.)	94.15	Weber St.	97.02
199	Rhode Island	78.08	Liberty	94.14	N. Iowa	96.95
200	Villanova	78.06	Robert Morris	93.99	McNeese St.	96.93
201	Harvard	76.98	Cent. Florida	93.73	Cal St.-Sacramento	96.67
202	Temple	76.91	Campbell	93.54	St. Peter's	96.64
203	Tn.-Chattanooga	75.91	New Hampshire	93.50	Marshall	96.59
204	Tennessee St.	75.29	Texas Christian	93.39	Cleveland St.	96.55
205	Bethune-Cookman	74.90	Monmouth (N.J.)	93.34	Mo.-Kansas City	96.54
206	Murray St.	74.49	Centenary (La.)	93.00	E. Tennessee St.	96.54
207	Tenn.-Martin	73.97	Air Force	92.96	UC Irvine	96.44
208	Siena	73.22	Southern	92.89	Austin Peay	96.41
209	Brown	71.44	Georgia St.	92.82	Holy Cross	96.33

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
210	Yale	71.40	Navy	92.81	Idaho	96.24
211	Holy Cross	71.22	Colgate	92.80	Delaware	96.22
212	Colgate	71.19	Florida Int'l	92.74	Towson St.	96.10
213	SE Missouri St.	70.77	Loyola (Ill.)	92.66	N.C.-Greensboro	96.03
214	Va. Military	69.80	Citadel	92.18	Radford	96.00
215	Bucknell	69.80	Wis.-Milwaukee	92.13	Alabama St.	95.90
216	Columbia	66.53	Fairfield	92.02	Cent. Florida	95.84
217	Texas Southern	66.29	Towson St.	92.01	Idaho St.	95.82
218	Austin Peay	64.11	Marist	92.00	Cal St.-Fullerton	95.72
219	Fordham	64.00	Wright St.	91.98	Sam Houston St.	95.70
220	Morgan St.	63.12	Mount St. Mary's (Md.)	91.95	Charleston (S.C.)	95.54
221	Charleston Southern	58.37	Fairleigh Dickinson	91.74	Temple	95.53
222	Morehead St.	58.14	E. Illinois	91.73	Campbell	95.31
223	Prairie View A&M	47.34	NE Illinois	91.62	St. Francis (Pa.)	95.16
224			Furman	91.52	American U.	95.00
225			McNeese St.	91.52	Manhattan	94.93
226			Akron	91.39	Youngstown St.	94.92
227			Alabama St.	91.20	Harvard	94.90
228			Coastal Carolina	91.13	Ball St.	94.88
229			Wichita St.	91.12	South Alabama	94.77
230			Bucknell	90.98	Florida A&M	94.63

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
231			Stetson	90.89	Virginia Commonwealth	94.58
232			Morehead St.	90.88	St. Louis	94.56
233			N. Carolina A&T	90.87	Boston U.	94.54
234			Texas-San Antonio	90.74	Murray St.	94.53
235			American U.	90.55	Hartford	94.41
236			Creighton	90.50	SW Louisiana	94.39
237			Northwestern St.	90.36	Md.-Baltimore County	94.37
238			Austin Peay	90.19	Tenn.-Martin	94.36
239			Boston U.	90.12	Georgia St.	94.22
240			Indiana St.	90.05	Monmouth (N.J.)	94.16
241			Holy Cross	89.97	Morehead St.	94.16
242			Cal St.-Northridge	89.96	Texas-San Antonio	94.08
243			Loyola Marymount	89.93	Jackson St.	94.03
244			George Mason	89.77	Howard	93.92
245			Tennessee Tech	89.70	Mercer	93.88
246			Samford	89.65	N. Carolina A&T	93.84
247			Dartmouth	89.25	Cornell	93.65
248			Charleston Southern	88.90	Troy St.	93.65
249			Middle Tenn. St.	88.84	Akron	93.53
250			Stephen F. Austin	88.82	Canisius	93.47
251			Iona	88.71	Drexel	93.45

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
252			Youngstown St.	88.55	Marist	93.30
253			Fordham	88.41	Iona	93.22
254			W. Illinois	88.39	Liberty	93.06
255			SE Missouri St.	88.26	Colgate	93.06
256			S. Carolina St.	88.06	Texas-Pan American	92.98
257			Oral Roberts	88.00	Evansville	92.96
258			Northeastern	87.96	Navy	92.89
259			Md.-E. Shore	87.73	Oral Roberts	92.79
260			Yale	87.55	E. Illinois	92.75
261			Marshall	87.42	N.C.-Wilmington	92.56
262			Brown	87.41	New Mexico	92.48
263			Cent. Michigan	87.31	Cent. Connecticut St.	92.41
264			Harvard	87.22	Hofstra	92.40
265			Vermont	87.17	Fla. Atlantic	92.23
266			Niagara	87.12	East Carolina	92.00
267			William & Mary	86.56	Wagner College	91.96
268			Sam Houston St.	86.53	Bucknell	91.95
269			Cornell	86.09	Coastal Carolina	91.92
270			Howard	85.84	E. Michigan	91.44
271			Buffalo	85.73	Lehigh	90.75
272			Troy St.	85.65	Long Island U.	90.35

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
273			Va. Military	85.62	Nevada	90.17
274			Tenn.-Martin	85.58	N.C.-Asheville	90.14
275			Lafayette	85.51	Davidson	89.41
276			Md.-Baltimore County	85.27	W. Carolina	89.13
277			SE Louisiana	85.15	Texas Southern	89.10
278			E. Washington	84.98	Robert Morris	89.07
279			Lehigh	84.66	Delaware St.	88.98
280			Miss. Valley St.	84.47	St. Francis (N.Y.)	88.96
281			Fla. Atlantic	84.26	Columbia	88.95
282			Morgan St.	83.92	Coppin St.	88.92
283			Hofstra	83.87	Cal St.-Northridge	88.81
284			Bethune-Cookman	83.77	Nicholls St.	88.76
285			Army	83.64	Winthrop	87.96
286			Mercer	83.59	Bethune-Cookman	87.80
287			Columbia	82.07	Chicago St.	87.77
288			Texas-Arlington	80.96	Charleston Southern	87.77
289			Louisiana Tech	80.58	Fairleigh Dickinson	86.83
290			N.C.-Asheville	79.90	Morgan St.	86.79
291			Delaware St.	79.65	Md.-E. Shore	85.68
292			Winthrop	78.62	Prairie View A&M	81.26
293			Florida A&M	78.39		

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	FB 1993		MBK 1993-1994		WBK 1993-1994	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
294			Grambling	78.34		
295			St. Francis (N.Y.)	78.05		
296			Long Island U.	77.94		
297			Chicago St.	77.89		
298			Cal St.-Sacramento	77.07		
299			Alcorn St.	76.24		
300			Cent. Connecticut St.	70.27		
301			Prairie View A&M	66.13		

Table 52: 1994-1995 Final Ratings

	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Penn St.	147.64	Kentucky	127.77	Tennessee	118.84
2	Florida	144.86	UCLA	124.05	Connecticut	117.80
3	Florida St.	142.65	Oklahoma St.	123.09	Vanderbilt	117.24
4	Nebraska	141.14	North Carolina	122.49	Stanford	116.68
5	Colorado	137.47	Massachusetts	121.92	Louisiana Tech	114.64
6	Tennessee	137.21	Kansas	121.75	Colorado	114.63
7	Miami (Fla.)	136.72	Virginia	120.73	Texas Tech	113.99
8	Southern Cal	136.24	Maryland	120.53	Georgia	112.97
9	Illinois	135.13	Wake Forest	120.35	Virginia	112.92
10	Michigan	133.90	Cincinnati	117.99	North Carolina	112.86
11	Ohio St.	133.04	Connecticut	117.88	Penn St.	112.81
12	Auburn	132.47	Arizona	117.57	Purdue	112.35
13	Wisconsin	131.07	Arkansas	117.11	W. Kentucky	112.24
14	Oregon	130.75	Mississippi St.	116.89	Alabama	111.56
15	Alabama	130.72	St. Louis	116.76	Mississippi	110.78
16	Utah	130.13	Utah	116.40	Florida	110.71
17	Texas A&M	130.00	Michigan St.	115.98	Oregon St.	110.62
18	Notre Dame	129.87	Villanova	115.63	Washington	110.47
19	Washington St.	128.70	Iowa St.	115.54	Ohio St.	109.86
20	Kansas St.	128.27	Arizona St.	115.53	Montana	109.47

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
21	Virginia	127.78	Florida	115.10	Kansas	109.11
22	Washington	127.57	Texas	115.06	Oklahoma	109.10
23	Arizona	127.39	Alabama	114.94	Wisconsin	108.88
24	Boston College	127.35	Oklahoma	114.43	Oregon	108.87
25	Georgia	125.84	Syracuse	114.42	Auburn	108.85
26	Michigan St.	125.50	Indiana	114.32	Duke	108.84
27	Mississippi St.	125.34	Memphis	114.07	N. Carolina St.	108.75
28	Colorado St.	124.68	Purdue	114.01	Arkansas	108.69
29	Virginia Tech	123.38	Georgia	113.87	Drake	108.54
30	North Carolina	123.18	Duke	113.72	Oklahoma St.	108.42
31	Texas	122.68	Iowa	113.61	San Diego St.	108.32
32	UCLA	122.23	Georgia Tech	113.39	George Washington	108.23
33	Texas Tech	122.13	DePaul	113.29	Indiana	107.90
34	Duke	121.61	Virginia Tech	112.76	Southern Miss.	107.78
35	Brigham Young	121.46	Miami (Ohio)	112.40	Seton Hall	107.63
36	Mississippi	121.28	Marquette	112.39	Texas A&M	107.60
37	Air Force	121.26	Oregon	112.38	Southern Cal	107.55
38	Kansas	121.25	Georgetown	112.10	Utah	107.49
39	Iowa	121.12	Temple	112.02	Memphis	107.23
40	South Carolina	120.77	Washington St.	111.94	Old Dominion	107.09
41	Oregon St.	120.66	Missouri	111.83	Clemson	107.05

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
42	LSU	120.38	Minnesota	111.71	Virginia Tech	107.04
43	Indiana	120.17	Florida St.	111.31	Michigan St.	107.01
44	Purdue	119.79	Evansville	111.24	DePaul	106.88
45	Arkansas	119.26	Tulsa	111.24	Kentucky	106.87
46	Oklahoma	119.11	Stanford	111.22	Southern Meth.	106.81
47	Stanford	118.84	Illinois	111.09	Louisville	106.77
48	Baylor	118.56	Texas Tech	110.98	Minnesota	106.53
49	N. Carolina St.	118.41	Louisville	110.98	Portland	106.52
50	West Virginia	118.22	Vanderbilt	110.64	Florida Int'l	106.47
51	California	118.07	Ohio U.	110.35	Notre Dame	106.28
52	East Carolina	117.40	Penn St.	110.17	SW Missouri St.	106.23
53	Minnesota	115.98	N. Carolina St.	110.04	Iowa	106.22
54	Southern Miss.	115.62	Montana St.	109.69	San Francisco	106.20
55	Idaho	115.49	Auburn	109.65	Grambling	106.06
56	Arizona St.	115.43	Brigham Young	109.61	Kansas St.	106.03
57	San Diego St.	115.25	Nebraska	109.25	Nebraska	105.99
58	New Mexico	114.97	Tulane	109.14	Creighton	105.58
59	Texas Christian	114.87	Xavier (Ohio)	109.12	Texas	105.54
60	Syracuse	114.87	New Mexico St.	108.97	Washington St.	105.54
61	Wyoming	114.76	W. Kentucky	108.97	Toledo	105.53
62	Bowling Green	114.45	Michigan	108.93	Wis.-Green Bay	105.43

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
63	Clemson	114.12	St. Bonaventure	108.89	Northwestern	105.43
64	Nevada	113.80	Clemson	108.86	S. Illinois	105.40
65	Northwestern	113.56	S. Illinois	108.79	Tulane	105.27
66	Louisville	113.53	Manhattan	108.78	Marquette	105.18
67	Rutgers	112.86	Utah St.	108.72	Stephen F. Austin	105.08
68	Youngstown St.	112.84	Weber St.	108.58	New Mexico St.	104.98
69	Memphis	112.82	Gonzaga	108.57	Georgia Tech	104.81
70	Fresno St.	112.51	Bradley	108.54	Villanova	104.69
71	Hawaii	111.83	California	108.50	Rhode Island	104.67
72	Marshall	111.39	South Florida	108.49	Arkansas St.	104.63
73	Pittsburgh	111.38	St. Joseph's (Pa.)	108.47	Missouri	104.58
74	Rice	111.21	Pennsylvania	108.41	St. Joseph's (Pa.)	104.51
75	Vanderbilt	110.74	UTEP	108.29	Massachusetts	104.51
76	Maryland	110.58	Providence	108.20	Butler	104.49
77	Oklahoma St.	110.25	N.C. Charlotte	108.15	Tennessee St.	104.49
78	Missouri	109.55	Santa Clara	108.13	UCLA	104.33
79	McNeese St.	109.34	Southern Miss.	107.92	Maine	104.31
80	Montana	109.31	St. John's	107.72	Pittsburgh	104.27
81	Boise St.	107.87	Hawaii	106.97	St. John's	104.18
82	Cent. Florida	106.96	Wisconsin	106.96	Santa Clara	104.12
83	N. Arizona	106.32	Rutgers	106.95	Miami (Ohio)	104.09

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
84	N. Illinois	105.43	Seton Hall	106.54	Rutgers	103.92
85	Georgia Tech	105.33	Colorado	106.48	Wichita St.	103.84
86	Iowa St.	105.14	Ball St.	106.17	Northwestern St.	103.71
87	Cent. Michigan	105.11	Nevada	106.17	Houston	103.64
88	Hofstra	104.13	Pittsburgh	106.06	Ohio U.	103.61
89	Southern Meth.	104.02	Drexel	105.97	Virginia Commonwealth	103.58
90	James Madison	103.88	Washington	105.95	Arizona	103.47
91	N. Iowa	103.29	George Washington	105.91	N.C. Charlotte	103.35
92	Stephen F. Austin	103.05	Wis.-Green Bay	105.84	N. Illinois	103.33
93	NE. Louisiana	102.84	Wyoming	105.64	Tennessee Tech	103.22
94	UNLV	102.62	New Mexico	105.63	Kent	103.20
95	Tulsa	102.48	Montana	105.56	UC Santa Barbara	103.17
96	W. Michigan	102.40	Long Beach St.	105.54	Boise St.	103.09
97	Boston U.	101.69	E. Michigan	105.51	California	103.06
98	Appalachian St.	101.25	Illinois St.	105.42	Illinois	102.93
99	North Texas	101.19	Oregon St.	105.31	South Carolina	102.91
100	Army	101.17	St. Mary's (Cal.)	104.71	Indiana St.	102.91
101	E. Kentucky	101.15	South Carolina	104.64	James Madison	102.90
102	Pacific	100.90	Tennessee	104.59	Detroit	102.77
103	Cincinnati	100.80	Ala.-Birmingham	104.51	Montana St.	102.72
104	Miami (Ohio)	100.66	LSU	104.44	Maryland	102.68

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
105	E. Washington	100.39	West Virginia	104.07	Bradley	102.60
106	SW Louisiana	100.31	Old Dominion	103.96	Middle Tenn. St.	102.44
107	Kentucky	100.23	SW Missouri St.	103.69	Rice	102.29
108			Canisius	103.35	Jackson St.	102.28
109	UTEP	99.98	N.C.-Greensboro	103.19	La Salle	102.13
110	Temple	99.44	Southern Cal	103.03	Southern Utah	102.10
111	St. John's	99.43	Miami (Fla.)	103.03	St. Mary's (Cal.)	102.04
112	Pennsylvania	99.30	Toledo	102.82	Providence	101.94
113	Toledo	99.27	Idaho St.	102.59	UC Irvine	101.94
114	W. Illinois	98.99	Nicholls St.	102.58	Pacific	101.93
115	Delaware	98.55	Charleston (S.C.)	102.57	Wake Forest	101.90
116	Ball St.	98.49	Mississippi	102.49	Ala.-Birmingham	101.74
117	New Hampshire	98.25	Pacific	102.40	LSU	101.72
118	Middle Tenn. St.	98.06	Colorado St.	102.38	Iowa St.	101.72
119	Troy St.	97.72	Fresno St.	102.38	Baylor	101.62
120	Northwestern St.	97.59	Virginia Commonwealth	102.34	Mount St. Mary's (Md.)	101.61
121	Georgia Southern	97.56	Kansas St.	102.26	UNLV	101.61
122	Illinois St.	96.85	Ill.-Chicago	101.98	W. Michigan	101.60
123	E. Michigan	96.84	Notre Dame	101.91	SW Texas St.	101.59
124	Wagner College	96.49	Portland	101.91	Alcorn St.	101.58
125	William & Mary	96.31	Bowling Green	101.23	Weber St.	101.53

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
126	Marist	96.27	Boston College	101.11	Appalachian St.	101.53
127	Utah St.	96.26	Boise St.	101.10	E. Tennessee St.	101.50
128	W. Carolina	95.99	W. Michigan	101.06	New Orleans	101.40
129	Wake Forest	95.63	Texas Southern	101.01	Illinois St.	101.26
130	Tulane	95.34	UC Santa Barbara	101.00	Mississippi St.	101.18
131	Georgetown	95.31	Rhode Island	100.97	St. Peter's	101.17
132	Navy	95.05	UNLV	100.95	Syracuse	101.10
133	Weber St.	94.70	New Orleans	100.53	Michigan	101.06
134	San Jose St.	94.58	Duquesne	100.25	UTEP	101.06
135	Monmouth (N.J.)	92.80	James Madison	100.05	E. Kentucky	101.05
136	Indiana St.	92.69	Rice	99.93	Florida St.	101.05
137	Robert Morris	92.60	Drake	99.91	Miami (Fla.)	100.89
138	Louisiana Tech	92.60	San Diego St.	99.91	Lamar	100.85
139	Dayton	92.59	UC Irvine	99.76	San Diego	100.84
140	Citadel	92.46	Marshall	99.75	Georgetown	100.82
141	E. Illinois	91.89	N.C.-Wilmington	99.71	Long Beach St.	100.77
142	Grambling	91.65	Texas Christian	99.66	Wyoming	100.74
143	S. Carolina St.	91.46	N. Illinois	99.56	Gonzaga	100.71
144	Towson St.	91.24	Detroit	99.49	Duquesne	100.70
145	E. Tennessee St.	90.99	Murray St.	99.44	Colorado St.	100.69
146	Houston	90.85	East Carolina	99.37	Furman	100.52

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
147	New Mexico St.	90.71	Wichita St.	99.13	Ill.-Chicago	100.50
148	Massachusetts	89.99	Jacksonville	98.97	McNeese St.	100.46
149	Idaho St.	89.23	Butler	98.87	Canisius	100.23
150	Connecticut	89.11	Coppin St.	98.72	N. Arizona	99.95
151	Nicholls St.	89.04	St. Peter's	98.71	E. Washington	99.95
152	Alcorn St.	88.80	Northeastern	98.65	Cal St.-Fullerton	99.95
153	Butler	88.62	La Salle	98.60	Pepperdine	99.89
154	Southern	88.46	Valparaiso	98.45	Brigham Young	99.89
155	W. Kentucky	88.43	Texas-Pan American	98.37	Xavier (Ohio)	99.83
156	SW Missouri St.	88.12	Southern Utah	98.24	Harvard	99.78
157	Lafayette	88.10	Tn.-Chattanooga	98.20	Bowling Green	99.72
158	Arkansas St.	87.99	Princeton	98.15	Georgia Southern	99.69
159	Furman	87.80	Ark.-Little Rock	98.13	Sam Houston St.	99.68
160	Villanova	87.56	Ohio St.	98.02	Holy Cross	99.61
161	Liberty	87.20	Texas A&M	97.75	Loyola (Md.)	99.52
162	Delaware St.	86.90	Air Force	97.73	SE Louisiana	99.50
163	Duquesne	86.70	New Hampshire	97.72	Wright St.	99.37
164	Canisius	86.56	Loyola Marymount	97.69	Fresno St.	99.19
165	Sam Houston St.	86.39	Idaho	97.43	St. Bonaventure	99.10
166	Princeton	86.25	Wright St.	97.36	Texas-Arlington	99.05
167	Kent	85.93	Boston U.	97.32	Siena	99.03

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
168	Northeastern	85.84	Delaware	97.32	South Florida	99.03
169	Drake	85.42	Rider	97.22	Northeastern	99.01
170	Cal-Poly SLO	85.26	Navy	96.99	W. Illinois	98.99
171	Brown	85.23	San Diego	96.89	Arizona St.	98.98
172	Iona	85.12	Indiana St.	96.05	Dartmouth	98.97
173	Montana St.	84.93	Charleston Southern	96.00	North Texas	98.89
174	St. Mary's (Cal.)	84.90	Colgate	95.78	Fairfield	98.70
175	Cal St.-Sacramento	84.74	W. Illinois	95.33	Florida A&M	98.44
176	Yale	84.67	E. Tennessee St.	95.32	Boston U.	98.44
177	Maine	84.49	Marist	95.31	Buffalo	98.42
178	Southern Utah	84.13	Stetson	95.01	Youngstown St.	98.38
179	Cent. Connecticut St.	84.01	Pepperdine	94.90	Boston College	98.27
180	Florida A&M	83.93	N. Iowa	94.71	Valparaiso	97.92
181	SW Texas St.	83.79	Monmouth (N.J.)	94.51	Vermont	97.84
182	Jackson St.	82.95	Louisiana Tech	94.44	E. Illinois	97.83
183	Ohio U.	82.49	Houston	94.36	Campbell	97.80
184	Ala.-Birmingham	82.32	Iona	94.28	Austin Peay	97.73
185	Columbia	82.15	Fairfield	94.27	Tn.-Chattanooga	97.65
186	Rhode Island	82.15	NE. Louisiana	94.03	Stetson	97.65
187	Tennessee Tech	81.78	Davidson	94.00	SE Missouri St.	97.54
188	Cornell	81.66	Dayton	93.95	Tenn.-Martin	97.30

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
189	Siena	81.62	Vermont	93.90	Cincinnati	97.27
190	Samford	81.36	Hartford	93.68	St. Francis (Pa.)	97.20
191	San Diego	81.16	Creighton	93.64	Hawaii	97.17
192	Bethune-Cookman	81.16	Buffalo	93.60	Dayton	97.15
193	Richmond	80.51	Morehead St.	93.37	West Virginia	97.11
194	St. Francis (Pa.)	80.29	N. Arizona	93.36	Monmouth (N.J.)	97.06
195	Dartmouth	80.24	Kent	93.28	Marshall	97.05
196	Tn.-Chattanooga	79.98	Richmond	93.24	Richmond	97.00
197	Tennessee St.	79.57	Mount St. Mary's (Md.)	93.08	Cleveland St.	96.98
198	Valparaiso	79.31	Siena	93.08	Fordham	96.72
199	Lehigh	79.25	Tennessee St.	92.68	Oral Roberts	96.72
200	SE Missouri St.	79.17	W. Carolina	92.61	Brown	96.67
201	Akron	78.10	Cal St.-Fullerton	92.53	N.C.-Greensboro	96.66
202	Austin Peay	77.09	Baylor	92.48	New Hampshire	96.63
203	Harvard	77.05	Bucknell	92.44	Troy St.	96.54
204	Murray St.	76.14	William & Mary	92.39	Delaware	96.36
205	S. Illinois	75.74	San Francisco	92.35	American U.	96.31
206	N. Carolina A&T	75.28	Samford	92.35	Nevada	96.29
207	Buffalo	75.25	Austin Peay	92.35	George Mason	96.25
208	Howard	74.08	American U.	92.31	Rider	96.24
209	Tenn.-Martin	73.64	San Jose St.	92.23	Princeton	96.22

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
210	Colgate	73.46	Holy Cross	92.10	Cent. Michigan	96.12
211	Bucknell	73.46	Hofstra	92.08	Akron	96.01
212	Alabama St.	73.29	SW Louisiana	92.06	Miss. Valley St.	95.89
213	Cal St.-Northridge	72.91	Akron	91.89	Manhattan	95.87
214	Holy Cross	71.19	Southern Meth.	91.86	Idaho St.	95.68
215	Evansville	70.44	Fairleigh Dickinson	91.69	Loyola Marymount	95.61
216	St. Peter's	69.82	Liberty	91.65	Cent. Florida	95.57
217	Miss. Valley St.	69.31	Furman	91.61	New Mexico	95.45
218	Va. Military	69.24	E. Washington	91.57	Radford	95.40
219	Texas Southern	67.97	Stephen F. Austin	91.56	San Jose St.	95.39
220	Fordham	66.49	Maine	91.56	South Alabama	95.34
221	Morgan St.	60.15	Mercer	91.52	Niagara	95.23
222	Charleston Southern	51.97	Loyola (Md.)	91.26	Cal St.-Sacramento	95.20
223	Morehead St.	46.03	Md.-Baltimore County	91.08	N. Iowa	95.06
224	Prairie View A&M	45.25	Cleveland St.	90.94	Fla. Atlantic	94.98
225			E. Illinois	90.79	Idaho	94.86
226			Texas-San Antonio	90.78	Pennsylvania	94.84
227			Youngstown St.	90.75	NE. Louisiana	94.78
228			Fordham	90.73	N. Carolina A&T	94.76
229			Jackson St.	90.53	Evansville	94.72
230			Cent. Florida	90.41	Howard	94.61

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
231			South Alabama	90.37	William & Mary	94.36
232			Towson St.	90.25	Navy	94.20
233			North Texas	90.12	Cornell	94.13
234			E. Kentucky	90.11	Georgia St.	94.12
235			Florida Int'l	89.97	Mercer	94.02
236			Miss. Valley St.	89.94	E. Michigan	94.00
237			SE Louisiana	89.89	Colgate	93.90
238			Dartmouth	89.87	Yale	93.85
239			N.C.-Asheville	89.77	Towson St.	93.75
240			Brown	89.69	Ball St.	93.72
241			Appalachian St.	89.67	W. Carolina	93.68
242			McNeese St.	89.51	Robert Morris	93.55
243			Lamar	89.51	St. Louis	93.53
244			Radford	89.51	Mo.-Kansas City	93.38
245			St. Francis (Pa.)	89.47	Drexel	93.34
246			Tennessee Tech	89.35	Southern	93.29
247			Southern	89.21	East Carolina	93.22
248			Troy St.	89.09	Wagner College	93.20
249			Centenary (La.)	88.83	Bucknell	93.19
250			Oral Roberts	88.57	Loyola (Ill.)	93.17
251			Georgia St.	88.48	NE Illinois	93.11

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
252			SE Missouri St.	88.35	Murray St.	92.74
253			N. Carolina A&T	88.04	SW Louisiana	92.72
254			Mo.-Kansas City	87.76	Davidson	92.45
255			Loyola (Ill.)	87.43	St. Francis (N.Y.)	92.39
256			Middle Tenn. St.	87.30	Cal-Poly SLO	92.38
257			George Mason	87.25	Morehead St.	92.28
258			Lehigh	87.23	Hofstra	92.17
259			Northwestern	87.21	Marist	91.90
260			Cal St.-Northridge	87.21	Coppin St.	91.76
261			Harvard	86.77	Cent. Connecticut St.	91.72
262			Citadel	86.61	Iona	91.66
263			Texas-Arlington	86.56	Texas-San Antonio	91.52
264			Arkansas St.	86.51	Hartford	91.48
265			Niagara	86.44	Wis.-Milwaukee	91.43
266			Wagner College	86.20	Texas Christian	91.39
267			Northwestern St.	86.12	Charleston (S.C.)	91.27
268			Alabama St.	86.06	S. Carolina St.	91.16
269			Cent. Michigan	85.50	Md.-Baltimore County	91.03
270			S. Carolina St.	85.46	Temple	90.94
271			Georgia Southern	85.26	Texas-Pan American	90.75
272			Va. Military	85.25	N.C.-Asheville	90.66

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
273			Winthrop	85.13	Coastal Carolina	90.23
274			SW Texas St.	84.86	Long Island U.	89.96
275			Md.-E. Shore	84.69	N.C.-Wilmington	89.95
276			Bethune-Cookman	84.52	Cal St.-Northridge	89.78
277			Yale	84.47	Charleston Southern	89.70
278			Fla. Atlantic	83.99	Liberty	89.66
279			Coastal Carolina	83.77	Alabama St.	89.58
280			Long Island U.	83.61	Delaware St.	89.53
281			Tenn.-Martin	83.56	Fairleigh Dickinson	89.21
282			Wis.-Milwaukee	83.43	Army	89.03
283			Alcorn St.	83.11	Lehigh	88.97
284			Sam Houston St.	83.03	Nicholls St.	88.83
285			Cal St.-Sacramento	82.88	Bethune-Cookman	88.40
286			St. Francis (N.Y.)	82.30	Texas Southern	88.09
287			Campbell	81.84	Winthrop	87.33
288			Army	81.42	Morgan St.	87.12
289			Cent. Connecticut St.	81.29	Lafayette	86.34
290			Howard	81.19	Prairie View A&M	85.46
291			Grambling	81.16	Md.-E. Shore	85.28
292			Chicago St.	80.12	Chicago St.	84.58
293			Delaware St.	80.06	Columbia	82.52

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	FB 1994		MBK 1994-1995		WBK 1994-1995	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
294			Robert Morris	79.98		
295			NE Illinois	79.83		
296			Cornell	79.06		
297			Morgan St.	77.36		
298			Columbia	77.05		
299			Florida A&M	76.10		
300			Lafayette	72.67		
301			Prairie View A&M	70.33		
302			Cal-Poly SLO	68.18		

Table 53: 1995-1996 Final Ratings

	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Nebraska	159.91	Kentucky	132.77	Tennessee	116.42
2	Florida	146.44	Connecticut	124.76	Stanford	115.52
3	Florida St.	145.90	Georgetown	121.70	Connecticut	115.41
4	Ohio St.	145.02	Massachusetts	121.43	Louisiana Tech	115.04
5	Kansas St.	140.60	Kansas	121.11	Georgia	115.03
6	Tennessee	139.71	Syracuse	119.88	Virginia	113.84
7	Colorado	139.05	Cincinnati	119.71	Old Dominion	112.88
8	Notre Dame	138.45	Villanova	119.12	Vanderbilt	112.61
9	Penn St.	138.37	Georgia	118.76	Penn St.	111.87
10	Northwestern	136.43	Mississippi St.	118.11	Purdue	111.85
11	Michigan	134.17	Arizona	117.47	Iowa	111.83
12	Virginia Tech	132.95	Wake Forest	117.42	Auburn	111.60
13	LSU	131.92	Georgia Tech	117.00	Alabama	111.56
14	Syracuse	131.36	Utah	116.92	Texas Tech	111.29
15	Iowa	131.23	Iowa	116.14	Duke	111.15
16	Southern Cal	131.11	Purdue	116.09	Wisconsin	110.70
17	Texas A&M	130.34	Indiana	115.69	Oregon St.	110.67
18	Auburn	129.70	Louisville	115.19	Notre Dame	110.54
19	Miami (Fla.)	129.05	North Carolina	114.99	Arizona	110.42
20	Virginia	128.91	Texas Tech	114.99	Florida	110.12

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
21	Texas	128.62	Boston College	114.77	Colorado	109.83
22	Purdue	128.08	Duke	114.39	Ohio St.	109.71
23	Washington	127.79	Stanford	114.37	Clemson	109.63
24	Illinois	127.40	Maryland	114.00	Stephen F. Austin	109.41
25	Kansas	126.72	Penn St.	113.86	Nebraska	109.02
26	Wisconsin	126.45	Marquette	113.62	Kansas	109.00
27	Montana	125.95	Michigan	113.55	Texas	108.95
28	Texas Tech	125.55	Memphis	113.47	Washington	108.81
29	Alabama	125.39	Oklahoma St.	113.08	Oregon	108.77
30	Baylor	124.76	Tulsa	112.84	DePaul	108.70
31	UCLA	124.07	New Mexico	112.51	N. Carolina St.	108.58
32	Oregon	124.02	UCLA	112.48	Utah	108.48
33	Michigan St.	123.95	Texas	112.48	Mississippi	108.34
34	Clemson	123.27	Arkansas	112.46	Northwestern	108.22
35	North Carolina	123.18	Oklahoma	112.41	Portland	108.11
36	Colorado St.	122.94	Tulane	112.14	Texas A&M	108.05
37	Stanford	122.69	N. Carolina St.	112.12	Oklahoma St.	107.93
38	Utah	122.32	Providence	112.04	Montana	107.91
39	East Carolina	122.28	Temple	112.04	North Carolina	107.76
40	Cincinnati	121.22	Iowa St.	111.85	Colorado St.	107.69
41	San Diego St.	121.21	Illinois	111.80	San Francisco	107.60

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
42	Georgia	121.15	Virginia	111.61	Southern Cal	107.55
43	Louisville	120.76	Clemson	111.43	Michigan St.	107.45
44	West Virginia	120.67	E. Michigan	111.16	UC Santa Barbara	107.43
45	Arizona St.	120.53	California	110.76	Toledo	107.39
46	Washington St.	120.42	Drexel	110.75	LSU	107.36
47	Air Force	120.30	South Carolina	110.70	Kent	107.20
48	Arizona	120.30	Nebraska	110.66	Memphis	107.16
49	Arkansas	120.27	Virginia Tech	110.44	South Carolina	107.13
50	Brigham Young	120.25	George Washington	110.41	Southern Meth.	106.86
51	Kentucky	119.35	Miami (Ohio)	110.16	Wake Forest	106.83
52	Wyoming	119.34	Washington St.	109.82	Arkansas	106.74
53	Miami (Ohio)	119.25	West Virginia	109.69	SW Missouri St.	106.70
54	South Carolina	118.97	Pittsburgh	109.59	San Diego St.	106.70
55	Mississippi	118.20	Florida St.	109.27	Georgia Tech	106.65
56	Army	118.06	St. Joseph's (Pa.)	109.20	UCLA	106.63
57	Georgia Tech	117.59	Rhode Island	108.76	W. Kentucky	106.51
58	McNeese St.	117.50	Tennessee	108.69	Southern Miss.	106.45
59	Southern Miss.	117.40	Bradley	108.69	George Washington	106.19
60	Oklahoma	116.49	Alabama	108.59	Missouri	106.11
61	Boston College	115.30	Florida	108.53	Washington St.	105.89
62	Navy	115.29	Fresno St.	108.32	Villanova	105.85

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
63	Minnesota	114.99	Minnesota	108.27	Indiana	105.68
64	California	114.74	Kansas St.	108.11	Illinois	105.66
65	N. Arizona	114.44	Oregon	108.10	Iowa St.	105.64
66	Marshall	114.06	Colorado St.	107.90	Maryland	105.46
67	Maryland	113.92	Mississippi	107.83	Maine	105.43
68	Toledo	113.80	Davidson	107.60	Massachusetts	105.24
69	Oklahoma St.	113.77	Virginia Commonwealth	107.56	Hawaii	105.12
70	Mississippi St.	113.12	Vanderbilt	107.31	Oklahoma	104.98
71	N. Carolina St.	112.84	St. John's	106.89	Tulane	104.78
72	Nevada	112.39	Brigham Young	106.86	Rice	104.77
73	Indiana	112.31	Montana St.	106.84	New Mexico St.	104.67
74	Texas Christian	111.82	Wis.-Green Bay	106.80	Seton Hall	104.61
75	Duke	110.63	N.C. Charlotte	106.80	Northwestern St.	104.54
76	Vanderbilt	110.54	Miami (Fla.)	106.78	Kansas St.	104.52
77	Pittsburgh	110.43	Santa Clara	106.69	Miami (Fla.)	104.40
78	Delaware	110.32	Washington	106.44	Rhode Island	104.38
79	Rutgers	109.38	Illinois St.	106.43	Appalachian St.	104.28
80	Fresno St.	109.30	Rutgers	106.36	Rutgers	104.07
81	SW Louisiana	108.91	Auburn	106.28	Louisville	104.06
82	New Mexico	108.87	Ark.-Little Rock	106.12	Mississippi St.	104.02
83	Missouri	108.84	Missouri	105.91	James Madison	103.99

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
84	Oregon St.	108.46	Michigan St.	105.82	Middle Tenn. St.	103.93
85	Idaho	108.38	Wisconsin	105.80	Providence	103.63
86	Memphis	108.18	Notre Dame	105.51	W. Michigan	103.61
87	Boise St.	107.99	Seton Hall	105.48	Kentucky	103.59
88	Rice	107.84	Hawaii	105.38	Wis.-Green Bay	103.39
89	W. Michigan	107.11	New Orleans	105.21	Detroit	103.32
90	Temple	107.08	W. Michigan	105.19	Georgetown	103.25
91	Tulsa	106.82	Ohio U.	104.98	St. Joseph's (Pa.)	103.19
92	Hofstra	106.51	St. Louis	104.76	S. Illinois	103.09
93	William & Mary	106.49	SW Missouri St.	104.64	Houston	103.00
94	Iowa St.	106.01	Charleston (S.C.)	104.55	Florida Int'l	102.97
95	Troy St.	105.38	DePaul	104.38	California	102.92
96	Houston	104.67	Pacific	104.38	La Salle	102.89
97	Utah St.	104.43	Weber St.	104.30	Butler	102.84
98	Ball St.	104.20	N. Illinois	104.23	Syracuse	102.84
99	Murray St.	104.13	Gonzaga	104.17	Weber St.	102.83
100	Stephen F. Austin	104.12	Evansville	104.17	Drake	102.82
101	E. Michigan	103.29	Long Beach St.	104.04	Arkansas St.	102.80
102	Hawaii	102.15	Manhattan	104.03	Santa Clara	102.80
103	Wake Forest	101.30	Wyoming	103.95	Ala.-Birmingham	102.78
104	N. Iowa	101.27	Houston	103.85	Montana St.	102.75

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
105	Weber St.	101.19	Southern Miss.	103.34	Harvard	102.70
106	Tulane	100.69	San Diego St.	103.32	St. Mary's (Cal.)	102.68
107	Bowling Green	100.62	Ball St.	103.29	New Mexico	102.62
108	James Madison	100.29	Xavier (Ohio)	103.28	Southern Utah	102.61
109	Cent. Florida	100.22	South Florida	103.23	Ohio U.	102.61
110			Ala.-Birmingham	103.10	Miami (Ohio)	102.56
111			Toledo	102.98	Arizona St.	102.52
112	Louisiana Tech	99.62	LSU	102.88	Pepperdine	102.45
113	New Mexico St.	99.50	N. Iowa	102.65	Illinois St.	102.43
114	Appalachian St.	99.48	UTEP	102.45	Pacific	102.37
115	Idaho St.	99.47	Marshall	102.05	Baylor	102.31
116	Cent. Michigan	99.43	Colorado	101.96	Bowling Green	102.26
117	Southern Meth.	99.01	Princeton	101.95	Michigan	102.22
118	Southern	98.87	Pennsylvania	101.94	N. Arizona	101.94
119	Villanova	98.37	Montana	101.57	Grambling	101.93
120	New Hampshire	98.37	Oral Roberts	101.51	Sam Houston St.	101.91
121	Georgia Southern	98.33	Creighton	101.50	Creighton	101.75
122	E. Illinois	98.09	Bowling Green	101.46	Boston College	101.64
123	Northwestern St.	97.21	Detroit	101.34	Buffalo	101.61
124	Rhode Island	96.79	W. Kentucky	101.34	West Virginia	101.54
125	Connecticut	96.64	Utah St.	101.31	Boise St.	101.41

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
126	E. Kentucky	96.14	Ohio St.	101.30	Austin Peay	101.28
127	San Jose St.	95.68	Austin Peay	101.00	N.C. Charlotte	100.93
128	Middle Tenn. St.	95.48	Kent	100.88	Holy Cross	100.90
129	Pennsylvania	94.94	Arizona St.	100.82	Xavier (Ohio)	100.89
130	SW Missouri St.	94.93	Mount St. Mary's (Md.)	100.72	Duquesne	100.84
131	Montana St.	94.81	Iona	100.71	Long Beach St.	100.83
132	Pacific	94.80	St. Bonaventure	100.53	SW Texas St.	100.78
133	Arkansas St.	94.62	Southern Cal	100.50	Lamar	100.54
134	Princeton	94.11	Murray St.	100.46	Wyoming	100.54
135	NE. Louisiana	93.96	N.C.-Wilmington	100.37	Florida St.	100.53
136	Massachusetts	93.84	Canisius	100.25	Brigham Young	100.39
137	UTEP	93.59	Duquesne	100.20	Manhattan	100.38
138	Robert Morris	92.89	Butler	100.17	George Mason	100.38
139	Monmouth (N.J.)	92.79	Portland	100.11	San Diego	100.29
140	N. Illinois	92.64	Rice	100.08	Fresno St.	100.06
141	Furman	92.51	Fairfield	99.86	UTEP	99.99
142	Richmond	92.47	UC Irvine	99.83	St. Peter's	99.95
143	Dayton	91.99	Rider	99.72	Texas-Arlington	99.80
144	Liberty	91.12	SW Louisiana	99.67	Akron	99.79
145	Florida A&M	91.05	Delaware	99.59	Youngstown St.	99.67
146	Indiana St.	91.00	Texas Christian	99.55	American U.	99.67

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
147	Illinois St.	90.89	Boston U.	99.54	Marshall	99.53
148	Towson St.	90.87	St. Peter's	99.51	UC Irvine	99.49
149	Northeastern	90.72	Tn.-Chattanooga	99.32	St. Francis (Pa.)	99.49
150	Dartmouth	90.64	NE. Louisiana	99.31	Virginia Tech	99.45
151	Duquesne	90.59	Nevada	99.15	Pittsburgh	99.19
152	Boston U.	90.51	Old Dominion	98.89	Vermont	99.14
153	E. Tennessee St.	90.27	N.C.-Greensboro	98.73	St. John's	99.09
154	E. Washington	89.63	Dayton	98.66	Stetson	99.05
155	Cal-Poly SLO	89.59	San Jose St.	98.53	Bradley	99.00
156	North Texas	89.33	San Diego	98.40	Mount St. Mary's (Md.)	98.99
157	Jackson St.	89.07	San Francisco	98.23	Cent. Florida	98.90
158	Lehigh	88.91	St. Mary's (Cal.)	98.19	South Alabama	98.89
159	Drake	88.66	Marist	98.19	New Orleans	98.86
160	Cornell	88.57	Drake	98.17	Cincinnati	98.86
161	Grambling	88.37	Baylor	98.09	Ill.-Chicago	98.83
162	Brown	88.27	Texas A&M	98.01	Wichita St.	98.80
163	Hampton	88.12	La Salle	97.91	Nevada	98.64
164	Ohio U.	87.92	Wichita St.	97.85	Marquette	98.60
165	Wagner College	87.35	Wright St.	97.78	Valparaiso	98.51
166	Sam Houston St.	87.07	Boise St.	97.60	Virginia Commonwealth	98.46
167	SW Texas St.	86.91	UC Santa Barbara	97.56	St. Bonaventure	98.40

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
168	Georgetown	86.83	Towson St.	97.53	Richmond	98.39
169	Bucknell	86.64	Jacksonville	97.48	E. Kentucky	98.37
170	Marist	86.11	Oregon St.	97.32	Minnesota	98.30
171	W. Illinois	85.84	Loyola Marymount	97.07	E. Washington	98.23
172	Tn.-Chattanooga	85.65	Monmouth (N.J.)	97.02	William & Mary	98.22
173	Buffalo	85.63	New Mexico St.	96.96	New Hampshire	98.21
174	Va. Military	85.50	S. Illinois	96.89	Fairfield	98.03
175	Youngstown St.	85.09	Southern Meth.	96.89	Princeton	98.03
176	Maine	84.27	W. Carolina	96.85	N. Illinois	97.88
177	Alabama St.	84.26	American U.	96.76	N.C.-Greensboro	97.86
178	St. Mary's (Cal.)	82.94	Colgate	96.63	Dayton	97.84
179	Citadel	82.15	Harvard	96.52	Alcorn St.	97.82
180	S. Illinois	81.36	William & Mary	96.50	Howard	97.73
181	Canisius	81.25	UNLV	96.41	NE Illinois	97.71
182	Jacksonville St.	81.24	Va. Military	96.21	N. Iowa	97.70
183	S. Carolina St.	81.06	Loyola (Md.)	96.06	Georgia Southern	97.65
184	Fordham	80.93	East Carolina	95.88	Davidson	97.63
185	San Diego	80.09	Idaho	95.44	Loyola Marymount	97.62
186	Lafayette	79.84	Texas-Pan American	95.40	Idaho	97.53
187	Yale	79.56	McNeese St.	95.34	Gonzaga	97.52
188	Akron	79.35	Louisiana Tech	95.20	Cal St.-Fullerton	97.38

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
189	Delaware St.	79.29	Cent. Michigan	95.15	Wright St.	97.36
190	W. Kentucky	79.24	S. Carolina St.	95.09	Tennessee Tech	97.35
191	Ala.-Birmingham	79.21	North Texas	95.07	Idaho St.	97.35
192	Kent	78.85	South Alabama	94.97	SE Louisiana	97.29
193	Cal St.-Sacramento	78.69	Maine	94.75	Murray St.	97.24
194	W. Carolina	78.43	Northwestern	94.65	Radford	97.10
195	Columbia	78.13	Indiana St.	94.46	North Texas	97.01
196	SE Missouri St.	77.75	Lamar	94.39	Loyola (Md.)	96.99
197	Samford	77.38	Liberty	94.33	Cleveland St.	96.95
198	Howard	76.16	Air Force	94.07	Indiana St.	96.94
199	Tenn.-Martin	75.73	George Mason	94.04	Dartmouth	96.81
200	Harvard	75.66	James Madison	93.97	Fordham	96.79
201	UNLV	75.47	Southern Utah	93.87	Florida A&M	96.74
202	Nicholls St.	74.52	Samford	93.87	South Florida	96.72
203	Wofford	74.33	Tennessee Tech	93.85	Tn.-Chattanooga	96.68
204	Iona	74.20	Wis.-Milwaukee	93.49	Troy St.	96.64
205	N. Carolina A&T	74.19	Loyola (Ill.)	93.48	SE Missouri St.	96.61
206	Tennessee St.	73.58	Bucknell	93.36	Georgia St.	96.54
207	St. Francis (Pa.)	72.90	Valparaiso	93.36	E. Tennessee St.	96.51
208	Cent. Connecticut St.	72.75	Fla. Atlantic	93.31	Hartford	96.46
209	Tennessee Tech	72.32	Miss. Valley St.	93.26	East Carolina	96.39

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
210	Holy Cross	71.98	Richmond	93.18	E. Michigan	96.32
211	Austin Peay	70.99	Stephen F. Austin	93.06	Campbell	96.26
212	Alcorn St.	70.71	Middle Tenn. St.	93.05	Fla. Atlantic	96.22
213	Valparaiso	70.54	Coppin St.	92.99	Bucknell	96.06
214	Evansville	70.43	Tennessee St.	92.93	San Jose St.	96.02
215	St. John's	68.57	Campbell	92.84	Ball St.	95.93
216	Bethune-Cookman	67.90	Arkansas St.	92.73	Furman	95.86
217	Texas Southern	67.43	Cal-Poly SLO	92.66	Cal St.-Sacramento	95.82
218	Colgate	67.08	SE Louisiana	92.65	Mercer	95.69
219	Butler	66.81	Texas-San Antonio	92.40	E. Illinois	95.66
220	Southern Utah	64.39	Radford	92.24	Brown	95.65
221	Siena	63.74	Sam Houston St.	92.15	Cent. Michigan	95.59
222	Cal St.-Northridge	62.93	Niagara	92.07	UNLV	95.44
223	St. Peter's	62.64	Tenn.-Martin	91.93	Niagara	95.33
224	Charleston Southern	59.75	Holy Cross	91.91	Jackson St.	95.28
225	Morehead St.	59.14	Pepperdine	91.79	Oral Roberts	95.28
226	Morgan St.	57.78	Charleston Southern	91.73	W. Illinois	95.25
227	Miss. Valley St.	57.70	Cent. Florida	91.66	Mo.-Kansas City	95.09
228	Prairie View A&M	37.52	Southern	91.42	Tenn.-Martin	95.05
229			Fordham	91.27	Morehead St.	95.01
230			N.C.-Asheville	91.08	Wagner College	94.98

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
231			Mercer	91.00	Navy	94.97
232			Vermont	90.88	Yale	94.90
233			Ill.-Chicago	90.84	Tennessee St.	94.90
234			Idaho St.	90.78	Siena	94.89
235			Cal St.-Fullerton	90.59	Temple	94.69
236			Dartmouth	90.57	Boston U.	94.52
237			E. Kentucky	90.41	W. Carolina	94.35
238			Wagner College	89.94	Evansville	94.31
239			Jackson St.	89.94	Jacksonville St.	94.20
240			Jacksonville St.	89.76	Miss. Valley St.	94.18
241			Navy	89.54	Rider	94.18
242			Mo.-Kansas City	89.53	Cornell	94.13
243			Georgia St.	89.13	Loyola (Ill.)	94.12
244			Stetson	89.00	Marist	94.09
245			Siena	88.97	McNeese St.	94.06
246			Brown	88.89	Lehigh	94.02
247			Hampton	88.64	Delaware	94.01
248			NE Illinois	88.45	Texas Christian	93.97
249			St. Francis (Pa.)	88.43	St. Louis	93.95
250			Furman	88.37	Monmouth (N.J.)	93.92
251			Lafayette	88.22	NE. Louisiana	93.83

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
252			Centenary (La.)	88.15	N. Carolina A&T	93.63
253			Cornell	88.14	Coppin St.	93.46
254			W. Illinois	87.99	Northeastern	93.27
255			Hartford	87.72	Fairleigh Dickinson	93.23
256			Texas-Arlington	87.66	Drexel	93.10
257			SW Texas St.	87.47	Cal-Poly SLO	93.08
258			New Hampshire	87.29	Texas-San Antonio	93.07
259			Akron	87.19	Texas-Pan American	93.01
260			Grambling	86.69	Canisius	92.92
261			Florida Int'l	86.57	Towson St.	92.91
262			Cent. Connecticut St.	86.45	Wis.-Milwaukee	92.87
263			Buffalo	86.36	Delaware St.	92.86
264			SE Missouri St.	86.32	Southern	92.32
265			Youngstown St.	86.19	Robert Morris	92.31
266			Cal St.-Northridge	86.09	Winthrop	92.19
267			N. Arizona	86.06	Colgate	92.17
268			E. Tennessee St.	86.05	Md.-Baltimore County	92.06
269			Hofstra	85.97	Long Island U.	92.02
270			Northeastern	85.63	Charleston (S.C.)	91.52
271			E. Illinois	85.58	Iona	91.51
272			Cal St.-Sacramento	85.57	Coastal Carolina	91.48

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
273			Appalachian St.	85.33	N.C.-Asheville	90.85
274			Morehead St.	84.95	Cal St.-Northridge	90.84
275			Fairleigh Dickinson	84.76	Charleston Southern	90.65
276			Northwestern St.	84.56	Nicholls St.	90.42
277			E. Washington	84.52	Hofstra	90.29
278			Columbia	84.19	Pennsylvania	90.19
279			Cleveland St.	84.17	S. Carolina St.	90.04
280			Nicholls St.	84.10	Army	89.86
281			Yale	83.87	N.C.-Wilmington	89.63
282			Texas Southern	83.29	St. Francis (N.Y.)	89.63
283			Citadel	82.87	Lafayette	89.47
284			Bethune-Cookman	82.58	SW Louisiana	89.37
285			Long Island U.	82.07	Hampton	89.00
286			Winthrop	82.00	Morgan St.	88.54
287			Md.-Baltimore County	81.99	Chicago St.	88.36
288			Alcorn St.	81.48	Cent. Connecticut St.	88.33
289			Howard	81.36	Bethune-Cookman	88.09
290			St. Francis (N.Y.)	81.26	Columbia	88.08
291			Lehigh	81.11	Liberty	87.37
292			Robert Morris	80.71	Wofford	87.06
293			Troy St.	80.51	Md.-E. Shore	86.53

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	FB 1995		MBK 1995-1996		WBK 1995-1996	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
294			Army	80.36	Texas Southern	85.86
295			Coastal Carolina	80.00	Prairie View A&M	85.18
296			Morgan St.	79.66	Alabama St.	85.13
297			Md.-E. Shore	78.66		
298			Georgia Southern	78.66		
299			N. Carolina A&T	78.49		
300			Wofford	78.08		
301			Delaware St.	77.36		
302			Alabama St.	76.08		
303			Florida A&M	75.43		
304			Chicago St.	70.29		
305			Prairie View A&M	69.20		

Table 54: 1996-1997 Final Ratings

	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
1	Nebraska	155.39	Kentucky	128.19	Stanford	116.97
2	Florida	151.95	Kansas	125.25	Old Dominion	116.63
3	Ohio St.	150.95	North Carolina	122.41	Connecticut	115.75
4	Florida St.	147.47	Minnesota	122.01	Tennessee	113.61
5	Arizona St.	145.22	Arizona	121.20	Georgia	113.05
6	Notre Dame	143.04	Duke	119.96	Louisiana Tech	112.88
7	Tennessee	139.61	Stanford	119.92	North Carolina	112.50
8	Colorado	139.54	Wake Forest	118.67	Alabama	112.15
9	Penn St.	139.13	Iowa	118.39	Virginia	111.90
10	Texas	137.70	Cincinnati	118.35	Purdue	111.64
11	North Carolina	137.12	Utah	118.20	Notre Dame	111.40
12	Washington	137.10	UCLA	116.92	Florida	111.17
13	Syracuse	136.51	California	116.67	Vanderbilt	111.01
14	Kansas St.	135.18	Michigan	116.57	Iowa	111.00
15	Michigan	134.95	Clemson	115.88	Illinois	111.00
16	Iowa	133.94	Tulsa	115.72	George Washington	110.99
17	Virginia Tech	133.70	Villanova	115.55	N. Carolina St.	110.87
18	Brigham Young	131.92	Rhode Island	115.26	Kansas	110.73
19	Miami (Fla.)	131.42	Maryland	115.24	Michigan St.	110.73
20	Southern Cal	131.26	Illinois	115.17	Arizona	110.59

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
21	Virginia	131.11	Providence	115.08	Texas	110.57
22	Alabama	130.51	Xavier (Ohio)	115.02	Colorado	110.55
23	Texas Tech	130.48	South Carolina	114.98	Oregon	110.16
24	Wisconsin	129.60	Florida St.	114.91	Duke	110.08
25	Marshall	129.02	N. Carolina St.	114.81	Southern Cal	109.92
26	Michigan St.	128.65	West Virginia	114.66	Nebraska	109.69
27	UCLA	127.88	New Mexico	114.26	LSU	109.66
28	LSU	127.87	St. Joseph's (Pa.)	114.25	Texas Tech	109.53
29	Texas A&M	127.64	Temple	114.10	Wisconsin	109.15
30	Stanford	127.37	Syracuse	113.85	Penn St.	108.98
31	Northwestern	127.35	Iowa St.	113.28	Portland	108.79
32	Auburn	126.59	Oklahoma	113.12	Tulane	108.76
33	West Virginia	126.16	Purdue	113.04	Auburn	108.73
34	Oregon	126.01	Virginia	112.99	San Francisco	108.69
35	Wyoming	124.35	Indiana	112.96	Washington	108.63
36	East Carolina	124.31	Boston College	112.86	Northwestern	108.41
37	Air Force	123.76	Arkansas	112.74	Clemson	108.27
38	Montana	123.12	Georgia	112.64	Iowa St.	108.10
39	South Carolina	122.82	Connecticut	112.61	San Diego St.	108.05
40	Arizona	122.53	Marquette	112.42	Toledo	108.05
41	Army	122.21	Wisconsin	112.34	Arkansas	107.89

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
42	Southern Miss.	122.09	Texas Tech	112.17	Maryland	107.85
43	Washington St.	121.12	Michigan St.	111.79	Utah	107.80
44	Navy	121.09	Oregon	111.75	Oklahoma St.	107.72
45	Nevada	120.89	Georgetown	111.68	Stephen F. Austin	107.67
46	Clemson	120.80	Southern Cal	111.62	Michigan	107.65
47	Georgia	120.75	Notre Dame	111.05	UC Santa Barbara	107.52
48	San Diego St.	120.44	Vanderbilt	110.78	W. Kentucky	107.45
49	Indiana	120.27	N.C. Charlotte	110.63	Louisville	107.38
50	Houston	119.33	Massachusetts	110.54	DePaul	107.31
51	Purdue	119.14	Washington	110.30	Indiana	107.23
52	California	119.11	Pittsburgh	110.22	Ohio St.	106.89
53	Kansas	118.85	Texas Christian	110.08	Montana	106.87
54	Colorado St.	118.47	Mississippi	110.04	Drake	106.74
55	Iowa St.	117.75	George Washington	110.00	Memphis	106.71
56	Mississippi St.	117.61	Texas	109.98	St. Joseph's (Pa.)	106.65
57	Rice	117.55	Louisville	109.87	Kansas St.	106.64
58	Missouri	116.61	Colorado	109.31	Georgia Tech	106.38
59	Baylor	116.58	Nebraska	109.24	UCLA	106.27
60	Georgia Tech	116.48	Illinois St.	109.19	Maine	106.24
61	Cincinnati	115.40	Miami (Ohio)	109.00	Mississippi	106.15
62	Minnesota	115.08	Bowling Green	108.89	Hawaii	106.03

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
63	Louisville	114.97	Pacific	108.86	Santa Clara	105.94
64	Miami (Ohio)	114.43	St. John's	108.68	Colorado St.	105.90
65	Utah	114.22	Georgia Tech	108.60	Southern Meth.	105.63
66	New Mexico	113.46	Alabama	108.37	Marquette	105.51
67	Memphis	113.43	Miami (Fla.)	108.09	Kent	105.47
68	Arkansas	113.37	UNLV	108.04	Rice	105.18
69	Oklahoma	113.17	Bradley	107.95	Boston College	104.99
70	Tulane	113.07	Missouri	107.88	Detroit	104.71
71	William & Mary	113.06	Ohio St.	107.74	Buffalo	104.60
72	Ball St.	112.57	Tulane	107.72	Miami (Fla.)	104.60
73	Oklahoma St.	112.47	Oklahoma St.	107.52	SW Missouri St.	104.43
74	Vanderbilt	112.38	Memphis	107.51	Arkansas St.	104.29
75	Boston College	111.79	Princeton	107.33	Illinois St.	104.25
76	Illinois	111.30	Hawaii	107.33	Georgetown	104.17
77	Maryland	110.94	New Mexico St.	107.30	Pepperdine	103.75
78	N. Iowa	110.75	Oral Roberts	107.13	James Madison	103.71
79	Southern Meth.	110.74	Charleston (S.C.)	106.97	Baylor	103.66
80	Kentucky	109.96	Butler	106.88	Youngstown St.	103.58
81	N. Carolina St.	109.67	Washington St.	106.64	Oregon St.	103.37
82	Ohio U.	109.38	SW Missouri St.	106.52	Seton Hall	103.34
83	Mississippi	108.75	Virginia Tech	106.03	Wake Forest	103.32

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
84	Utah St.	107.98	South Alabama	105.51	St. Mary's (Cal.)	103.16
85	Oregon St.	107.74	Florida	105.16	Wichita St.	103.06
86	Villanova	107.41	Fresno St.	105.13	West Virginia	103.05
87	Tulsa	107.37	Nevada	104.78	Grambling	103.04
88	SW Louisiana	107.25	Canisius	104.66	Troy St.	103.02
89	Idaho	106.97	N. Iowa	104.54	Montana St.	103.00
90	Cent. Florida	105.97	Seton Hall	104.34	Washington St.	102.75
91	N. Arizona	105.64	Tn.-Chattanooga	104.33	La Salle	102.72
92	Delaware	105.55	Old Dominion	104.17	Villanova	102.70
93	New Hampshire	105.43	Auburn	104.12	Bowling Green	102.68
94	Fresno St.	105.12	Baylor	104.11	New Mexico	102.66
95	E. Tennessee St.	104.70	Drexel	104.08	American U.	102.66
96	Texas Christian	104.63	Long Island U.	103.87	Missouri	102.64
97	Louisiana Tech	103.63	Utah St.	103.84	Providence	102.55
98	Temple	103.38	Ohio U.	103.77	Kentucky	102.52
99	Duke	103.10	Colorado St.	103.56	Cincinnati	102.43
100	Pittsburgh	102.85	E. Michigan	103.45	Massachusetts	102.37
101	Northeastern	101.64	St. Bonaventure	103.41	Wyoming	102.28
102	Cal St.-Northridge	101.63	Wichita St.	103.33	Bradley	102.20
103	Troy St.	101.52	New Orleans	103.17	Wis.-Green Bay	102.19
104	Furman	101.46	Dayton	103.12	Texas A&M	102.13

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
105	Dartmouth	101.11	Southern Meth.	102.96	Mississippi St.	102.12
106	Cent. Michigan	101.10	Rutgers	102.90	Texas-Arlington	101.96
107	Toledo	101.03	Detroit	102.86	SW Texas St.	101.90
108	E. Michigan	100.29	St. Mary's (Cal.)	102.78	Southern Miss.	101.88
109	Murray St.	100.18	Penn St.	102.66	St. Peter's	101.87
110	James Madison	100.13	Creighton	102.66	E. Kentucky	101.77
111			Iona	102.63	Butler	101.74
112	Maine	99.92	Valparaiso	102.60	Brigham Young	101.73
113	Weber St.	99.74	Santa Clara	102.55	S. Illinois	101.72
114	Connecticut	99.60	Ala.-Birmingham	102.50	Rutgers	101.70
115	Rutgers	99.30	Boise St.	102.47	Miami (Ohio)	101.65
116	E. Washington	99.15	Rice	102.21	NE Illinois	101.61
117	Wake Forest	98.88	Evansville	102.03	N. Arizona	101.59
118	Howard	98.61	Mississippi St.	102.01	Vermont	101.56
119	Appalachian St.	98.29	LSU	101.93	Ala.-Birmingham	101.53
120	SW Missouri St.	98.29	UTEP	101.90	Weber St.	101.53
121	E. Illinois	98.02	La Salle	101.87	Florida Int'l	101.51
122	UTEP	97.87	Texas A&M	101.81	Harvard	101.41
123	Stephen F. Austin	97.70	Kansas St.	101.79	Richmond	101.39
124	Montana St.	97.68	Duquesne	101.53	Ohio U.	101.38
125	Bowling Green	97.66	Wyoming	101.53	Appalachian St.	101.35

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
126	W. Michigan	97.03	Virginia Commonwealth	101.47	Holy Cross	101.34
127	Ala.-Birmingham	96.74	San Diego	101.46	UTEP	101.33
128	Georgia Southern	96.47	Arizona St.	101.38	South Carolina	101.14
129	San Jose St.	96.36	Oregon St.	101.36	Arizona St.	101.14
130	Northwestern St.	96.09	Boston U.	101.29	George Mason	100.98
131	North Texas	95.88	Northwestern	101.27	California	100.83
132	W. Illinois	95.82	Davidson	101.00	Texas Christian	100.75
133	Youngstown St.	95.65	Tennessee	100.92	Fresno St.	100.57
134	UNLV	94.09	East Carolina	100.92	N. Iowa	100.57
135	Richmond	93.68	Ball St.	100.71	Florida St.	100.47
136	Akron	93.61	Wis.-Green Bay	100.69	Minnesota	100.44
137	Hofstra	93.45	Southern Miss.	100.66	New Orleans	100.42
138	Florida A&M	93.40	Louisiana Tech	100.56	Duquesne	100.35
139	Massachusetts	93.10	W. Michigan	100.44	Indiana St.	100.32
140	Jackson St.	93.09	S. Illinois	100.39	Creighton	100.28
141	Buffalo	92.99	Coppin St.	100.18	UC Irvine	100.25
142	McNeese St.	92.94	Akron	99.81	New Hampshire	100.17
143	Rhode Island	92.93	St. Louis	99.81	Alcorn St.	99.97
144	NE. Louisiana	92.62	San Francisco	99.80	Syracuse	99.90
145	Pennsylvania	91.58	Ill.-Chicago	99.60	Furman	99.90
146	Va. Military	91.17	Houston	99.57	Idaho	99.78

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
147	Arkansas St.	91.07	Gonzaga	99.45	St. John's	99.72
148	Indiana St.	90.75	Richmond	99.39	Idaho St.	99.70
149	Hawaii	90.35	Montana	99.35	Austin Peay	99.65
150	Duquesne	90.11	Monmouth (N.J.)	99.32	Pittsburgh	99.64
151	Idaho St.	90.04	Toledo	99.23	Ball St.	99.63
152	Citadel	89.60	Delaware	99.03	Oklahoma	99.60
153	Dayton	89.20	Long Beach St.	98.92	Nevada	99.60
154	Colgate	89.19	James Madison	98.82	Tennessee Tech	99.59
155	St. Mary's (Cal.)	88.72	N.C.-Wilmington	98.73	N.C.-Greensboro	99.52
156	Nicholls St.	88.68	N. Arizona	98.73	Dayton	99.48
157	Robert Morris	88.57	San Jose St.	98.66	Virginia Commonwealth	99.40
158	Brown	88.44	Dartmouth	98.61	Sam Houston St.	99.39
159	Sam Houston St.	88.19	Cal-Poly SLO	98.44	Marshall	99.38
160	Drake	87.82	Ark.-Little Rock	98.41	St. Bonaventure	99.20
161	Bucknell	87.76	Murray St.	98.22	McNeese St.	99.09
162	Tn.-Chattanooga	87.19	W. Illinois	98.04	Oral Roberts	98.96
163	Columbia	86.86	Harvard	97.80	Cent. Michigan	98.76
164	Lafayette	86.79	Loyola (Md.)	97.77	Xavier (Ohio)	98.71
165	E. Kentucky	86.48	Hartford	97.68	Fairfield	98.56
166	New Mexico St.	86.47	William & Mary	97.64	Campbell	98.49
167	Lehigh	86.43	Navy	97.53	Boise St.	98.35

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
168	Middle Tenn. St.	86.04	Liberty	97.06	Valparaiso	98.34
169	W. Kentucky	85.65	Florida Int'l	96.83	Davidson	98.25
170	Illinois St.	85.63	Austin Peay	96.77	St. Louis	98.17
171	Southern	85.52	Pennsylvania	96.68	Howard	98.13
172	Cal-Poly SLO	85.50	Cal St.-Northridge	96.61	Cal St.-Fullerton	98.09
173	Boise St.	85.43	Marshall	96.38	Wis.-Milwaukee	98.08
174	Harvard	85.42	Indiana St.	96.37	N.C. Charlotte	98.05
175	W. Carolina	84.93	Kent	96.11	St. Francis (Pa.)	98.05
176	S. Illinois	84.80	Lamar	95.86	Navy	97.91
177	Towson St.	83.58	McNeese St.	95.79	Fordham	97.78
178	N. Illinois	83.40	Buffalo	95.79	Portland St.	97.69
179	Cornell	83.32	San Diego St.	95.66	Texas-San Antonio	97.65
180	N. Carolina A&T	83.09	Cal St.-Fullerton	95.49	Northwestern St.	97.64
181	Portland St.	83.02	Fairfield	95.46	Middle Tenn. St.	97.61
182	Princeton	82.66	South Florida	95.37	East Carolina	97.55
183	Fordham	82.23	Bucknell	95.00	South Florida	97.54
184	SW Texas St.	82.08	American U.	94.93	Mo.-Kansas City	97.52
185	S. Carolina St.	81.99	Loyola (Ill.)	94.90	Georgia Southern	97.49
186	Georgetown	81.83	Air Force	94.85	Long Beach St.	97.33
187	Yale	81.74	UC Santa Barbara	94.83	Liberty	97.27
188	Kent	81.52	Middle Tenn. St.	94.76	Virginia Tech	97.19

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
189	Jacksonville St.	81.14	Hofstra	94.75	Pacific	97.10
190	Monmouth (N.J.)	80.85	NE Illinois	94.75	Wagner College	97.09
191	Texas Southern	79.97	Appalachian St.	94.73	South Alabama	97.08
192	Liberty	79.92	North Texas	94.49	Tn.-Chattanooga	97.08
193	Hampton	79.65	W. Kentucky	94.30	Jacksonville St.	97.07
194	Tennessee St.	78.94	Weber St.	94.19	Loyola Marymount	97.02
195	Marist	78.09	N. Illinois	94.11	Southern Utah	96.97
196	Southern Utah	78.08	Arkansas St.	94.08	Hartford	96.81
197	SE Missouri St.	77.28	Mount St. Mary's (Md.)	93.85	San Jose St.	96.77
198	Tennessee Tech	77.26	St. Peter's	93.83	N. Illinois	96.74
199	Wofford	76.92	Pepperdine	93.77	Brown	96.71
200	Boston U.	76.19	Fordham	93.76	Rhode Island	96.64
201	Wagner College	75.98	Charleston Southern	93.66	Mercer	96.51
202	Samford	75.64	Loyola Marymount	93.64	William & Mary	96.50
203	Cal St.-Sacramento	75.57	Rider	93.63	Cleveland St.	96.44
204	Alcorn St.	74.57	Montana St.	93.54	New Mexico St.	96.44
205	Holy Cross	74.18	Towson St.	93.48	San Diego	96.40
206	Cent. Connecticut St.	73.20	SW Louisiana	93.37	Siena	96.37
207	St. John's	72.50	Drake	93.34	Houston	96.32
208	Canisius	71.71	DePaul	93.29	Tennessee St.	96.24
209	Miss. Valley St.	71.21	Idaho	93.29	Evansville	96.14

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
210	Grambling	69.76	Manhattan	92.97	E. Michigan	96.14
211	Delaware St.	67.63	Fla. Atlantic	92.96	Murray St.	96.12
212	Austin Peay	67.32	Portland	92.92	Stetson	96.11
213	Alabama St.	66.90	Maine	92.81	N.C.-Asheville	95.98
214	Morehead St.	66.11	NE. Louisiana	92.78	Temple	95.93
215	Valparaiso	65.35	Fairleigh Dickinson	92.77	Loyola (Md.)	95.91
216	Tenn.-Martin	63.26	N.C.-Asheville	92.74	E. Illinois	95.90
217	Butler	63.10	Idaho St.	92.73	N.C.-Wilmington	95.90
218	St. Francis (Pa.)	61.12	Wright St.	92.69	Cal St.-Sacramento	95.87
219	Evansville	60.79	SW Texas St.	92.68	NE. Louisiana	95.86
220	San Diego	60.22	St. Francis (Pa.)	92.45	Dartmouth	95.84
221	Siena	59.32	George Mason	92.28	Cent. Florida	95.67
222	Bethune-Cookman	57.19	Colgate	91.91	Mount St. Mary's (Md.)	95.65
223	Morgan St.	55.23	Cleveland St.	91.77	Georgia St.	95.57
224	Charleston Southern	54.96	Niagara	91.64	Jackson St.	95.52
225	St. Peter's	54.44	Vermont	91.49	Charleston (S.C.)	95.52
226	Fairfield	52.32	Troy St.	91.48	UNLV	95.51
227	Iona	50.04	Tennessee Tech	91.47	Hofstra	95.49
228	Prairie View A&M	42.61	Citadel	91.32	Fla. Atlantic	95.44
229			Radford	91.11	E. Washington	95.44
230			Miss. Valley St.	90.97	E. Tennessee St.	95.34

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
231			Jackson St.	90.82	Radford	95.30
232			Tenn.-Martin	90.79	Ill.-Chicago	95.29
233			Cornell	90.78	Morehead St.	95.28
234			Siena	90.73	Akron	95.25
235			W. Carolina	90.69	Gonzaga	95.19
236			Southern Utah	90.53	SE Louisiana	95.19
237			N. Carolina A&T	90.28	Drexel	95.04
238			N.C.-Greensboro	89.86	W. Illinois	95.01
239			Portland St.	89.79	Tulsa	94.98
240			Cent. Michigan	89.52	Monmouth (N.J.)	94.78
241			Va. Military	89.26	Rider	94.70
242			S. Carolina St.	89.12	Lafayette	94.68
243			Tennessee St.	89.12	Lehigh	94.67
244			Northeastern	89.08	W. Carolina	94.66
245			Northwestern St.	89.05	Nicholls St.	94.51
246			Wis.-Milwaukee	88.87	Towson St.	94.22
247			Samford	88.86	Delaware	94.19
248			Youngstown St.	88.57	W. Michigan	94.19
249			SE Missouri St.	88.24	Canisius	94.17
250			Bethune-Cookman	87.94	Princeton	94.14
251			Furman	87.85	Wright St.	94.08

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
252			Jacksonville	87.80	Cal St.-Northridge	94.00
253			Yale	87.61	Long Island U.	93.94
254			Md.-E. Shore	87.57	Bucknell	93.87
255			Cent. Connecticut St.	87.42	Pennsylvania	93.83
256			Wagner College	87.12	North Texas	93.75
257			Brigham Young	87.11	Yale	93.63
258			Nicholls St.	87.11	Florida A&M	93.60
259			Coastal Carolina	86.99	Fairleigh Dickinson	93.44
260			E. Illinois	86.58	Southern	93.39
261			Mo.-Kansas City	86.43	Cal-Poly SLO	93.27
262			St. Francis (N.Y.)	86.29	Charleston Southern	93.23
263			New Hampshire	86.28	Miss. Valley St.	93.23
264			Winthrop	86.22	Air Force	93.13
265			Stephen F. Austin	86.20	Robert Morris	93.09
266			Hampton	86.11	Cornell	93.08
267			E. Washington	86.07	Iona	92.95
268			Alcorn St.	85.89	Tenn.-Martin	92.95
269			Campbell	85.82	Niagara	92.87
270			Holy Cross	85.43	Boston U.	92.72
271			Stetson	85.42	Lamar	92.71
272			Jacksonville St.	85.33	Winthrop	92.59

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
273			Texas-Arlington	85.22	Manhattan	92.35
274			Wofford	85.21	Loyola (Ill.)	91.98
275			Texas-San Antonio	85.03	Northeastern	91.96
276			Brown	84.89	SE Missouri St.	91.87
277			Columbia	84.84	Marist	91.46
278			Morehead St.	84.79	Cent. Connecticut St.	91.39
279			Georgia St.	84.68	Columbia	90.95
280			Morgan St.	84.67	Texas-Pan American	90.88
281			Marist	84.64	Colgate	90.60
282			Robert Morris	84.47	St. Francis (N.Y.)	90.55
283			Florida A&M	84.17	Morgan St.	90.50
284			Texas Southern	84.17	Md.-E. Shore	90.33
285			Lafayette	84.11	Chicago St.	90.29
286			E. Kentucky	83.99	Coastal Carolina	90.25
287			Sam Houston St.	83.69	N. Carolina A&T	89.82
288			Md.-Baltimore County	83.66	Md.-Baltimore County	89.56
289			Texas-Pan American	83.37	SW Louisiana	88.76
290			Southern	83.18	Wofford	88.57
291			Howard	82.99	Alabama St.	88.52
292			Centenary (La.)	82.83	Prairie View A&M	88.14
293			Delaware St.	82.77	Hampton	88.02

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	FB 1996		MBK 1996-1997		WBK 1996-1997	
	Team	*Rating*	*Team*	*Rating*	*Team*	*Rating*
294			SE Louisiana	82.48	Coppin St.	87.57
295			Army	82.41	Army	87.46
296			Grambling	81.89	Delaware St.	87.39
297			Cent. Florida	81.38	Bethune-Cookman	86.03
298			E. Tennessee St.	80.21	S. Carolina St.	85.52
299			Alabama St.	80.06	Texas Southern	82.57
300			Georgia Southern	80.00		
301			UC Irvine	79.97		
302			Chicago St.	79.97		
303			Prairie View A&M	78.83		
304			Cal St.-Sacramento	78.21		
305			Lehigh	74.88		
306			Mercer	71.95		

Vita

Thalia L. Hooker started working with sports and the Internet in 1994. She has recently detoured into the corporate world, but would someday love to return to the sports world.

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