

1955

A study of the past performance of Major League Baseball pitchers and the development of predictive indices for future performance

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Thesis
Rosenthal, S.
1955

BOSTON UNIVERSITY
SCHOOL OF EDUCATION

THESIS

A study of the Past Performance of Major League Baseball
Pitchers and the Development of Predictive Indices for
Future Performance.

Submitted by,

Sidney Rosenthal

(B.S. Boston University, 1953)

In Partial Fulfillment of Requirements for the Degree of
Master of Education.

1955

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TABLE OF CONTENTS

<u>CHAPTER</u>	<u>PAGE</u>
1. THE PROBLEM	1
Introduction	1
Statement of the Problem	1
Justification of the Problem	2
Scope of the Problem	2
II. STUDY OF LITERATURE	5
III. TECHNIQUES AND PROCEDURES USED IN THIS STUDY	6
Introduction	6
The Group	6
Sources	6
Procedures	8
IV. PRESENTATION AND ANALYSIS OF DATA	9
V. SUMMARY AND CONCLUSIONS	27
Summary	27
Conclusions	28
First major-league season	28
Second major-league season	29
Third major-league season	29
Fourth major-league season	29
Fifth major-league season	29
Sixth major-league season	29
Seventh major-league season	30
Eighth major-league season	30
Ninth major-league season	30
Tenth major-league season	30
Eleventh major-league season	30
Twelfth major-league season	30
Thirteenth major-league season	31

<u>CHAPTER</u>		<u>Page</u>
	Fourteenth, fifteenth and sixteenth	iv
V.	seasons	31
	Combined group trends	31
	Predictions	31
	Suggestions for Further Research	32
	Objective Analysis	43
APPENDIX		47
BIBLIOGRAPHY		81

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1.	Summary of Wins for fifteen pitchers in the Sixteen-Year Group	10
1A.	Summary of the Percentage of fifteen pitchers in the Sixteen Year Group	11
2.	Summary of Wins for thirty-five pitchers in the Thirteen to Fifteen Year Group	13
2A.	Summary of the Percentage of Thirty-five Pitchers in the Thirteen to Fifteen Year group	14
3.	Summary of Wins for Sixty-six pitchers in the Ten to Twelve Year Group	16
3A.	Summary of the Percentage of Sixty-six pitchers in the Ten to Twelve Year Group	17
4.	Summary of Wins for One hundred and ten Pitchers in the Seven to Nine Year Group	19
4A.	Summary of the Percentage of One hundred and ten Pitchers in the Seven to Nine Year group	20
5.	Summary of Wins for Two hundred and Forty-five Pitchers in the Four to Six Year Group	22
5A.	Summary of the Percentage of Two hundred Forty-five Pitchers in the Four to Six Year Group	23

LIST OF CHARTS

<u>Chart</u>		<u>Page</u>
1.	Trends for the Win and Percentage Totals of the Sixteen Year Group	12
2.	Trends for the Win and Percentage Totals of the Thirteen Year Group	15
3.	Trends for the Win and Percentage Totals of the Ten to Twelve Year Group	18
4.	Trends for the Win and Percentage Totals of the Seven to Nine Year Group	21
5.	Trends for the Win and Percentage Totals of the Four to Six Year Group	24
6.	Trends for the Win Totals of all Groups	25
7.	Trends for the Percentage Totals of all Groups	26
8.	Comparison of Robert Friend's Win and Percentage Totals with that of the trends of the Four to Six Year Group	33
9.	Comparison of Melvin Parnell's Win and Percentage Totals with that of the trends of the Ten to Twelve Year Group	35
10.	Comparison of Curt Simmons's Win and Percentage Totals with that of the trends of the Thirteen to Fifteen Year Group	37
11.	Comparison of Mike Garcia's Win and Percentage Totals with that of the trends of the Thirteen to Fifteen Year Group	39
12.	Comparison of Robin Roberts's Win and Percentage Totals with that of the trends of the Sixteen Year Group	41

Chapter I

PROBLEM

I Introduction

Although much has been written about baseball in the past, very little has been done to develop a scientific approach to the subject. Objective and scientific studies into the past records of performance may show significant trends in their rate of development. This writer feels that too many assumptions are now being made, with a disregard, to the scientific approach. This study is concerned with developing predictive indices for trends of pitchers. A study will be made of pitchers' records as far back as 1900.

One of the more important aspects which has been overlooked is the affect of players' performance over the first few years in relation to their performance in later years. There may be a definite correlation between trends made in early years at any skill and performance, or success made at the same skill in later life. Past records of pitchers will be used to develop this last idea.

II Statement of the Problem

An attempt will be made to find a way of predicting future pitching performance over the first four years. Trends or characteristics of moderate and very successful performers will be studied to determine what correlation

exists in the trends of pitchers. The development of predictive indices will be undertaken.

III Justification of the Problem

People close to baseball will be interested in obtaining some objective knowledge of the reliability of pitching skill. It may be found that pitchers having a gradual rise in improvement are more reliable. Players having a particular kind of trend over the first few years may prove to last over a greater number of years in a high level of performance.

It may be worthwhile to investigate other skills used in work or play to determine whether or not reaching one's peak performance early in life has any bearing on the length of time one can compete at a high level of efficiency.

IV Scope of the Problem

This study will include all Major League pitchers who have entered the Major League since 1900, and have played at least four seasons. The criteria for a full season will be at least twenty games played in the Major Leagues as a pitcher.

Players will be grouped as follows:

- (1) Those playing from Four to Six years in the major league
- (2) Those playing from Seven to Nine years in the major league.
- (3) Those playing from Ten to Twelve years in the major league.
- (4) Those playing from Thirteen to Fifteen years in the major league.
- (5) Those playing from Sixteen or more years in the major league.

Those players in the four to six year group have played an average of approximately five and a half years performing in twenty or more games during a season. The limits for this group range from exactly four seasons of play through six seasons. Other groups will be treated in the same manner. This cataloging will be done in an effort to determine whether or not these time-groups have particular characteristics. Graphs will be constructed showing the rise, peak, and decline of each time-group. These graphs will be compared to see if trends and correlations are significant. If they are significant, prediction may be considered reliable. Predictions will be made if significant trends and correlations occur.

The writer wanted to include earned run averages of pitchers in this study. Upon investigation, it was found that no records of earn run averages were available; therefore, they are not included in this study.

It is felt by the writer that various changes, such as rules, type of ball, and night baseball, do not have a great effect on performance and, therefore, are not given consideration in this study.

Chapter II

THE STUDY OF LITERATURE

This study is directly related to a thesis written by Joseph B. Oxendine at Boston University.¹ His study dealt with the past performances of Major League Batters and the development of predictive indices for future performance. As far as this writer can ascertain, this is the only such scientific study.

In a baseball statistics study, Porter² found that team batting skill has statistical significance on team standing. His study also suggested that the team weekly batting trend, upward or downward, has significant relationship to team success in winning games.

Creiger³ and Rogers⁴ devised batteries of tests in an effort to determine baseball ability. Both tests proved moderately successful in determining various baseball skills.

1.Oxendine, Joseph B., A study of the past performances of Major-League baseball batters and the Development of predictive indices for Future Performance. Master Thesis, B.U., 1953.

2.Porter, C.G., A Study of the Weekly Batting Averages of the Regular Players and Team Standing in the American League in 1947 and 1948 in Relation to Certain Psychological Concepts. Masters Service Paper. B.U. 1951.

3.Creiger, J.T., A Possible Battery of Tests to Predict Potential Ability in Baseball in Secondary Schools. Masters Thesis B.U. 1951.

4.Rodgers, E.G. and M.L. Heath, "An Experiment in the Use of Knowledge & Skills Tests in Playground Baseball." Research Quarterly. December 1931 pp. 113-115.

Chapter III

TECHNIQUES AND PROCEDURES USED IN THIS STUDY

I Introduction

An evaluation of the pitcher's performance will be measured in two ways; by taking the win total for each season and then, by using the per cent of his won and loss records. Any attempt to measure a pitcher's total performance would unnecessary mean a certain amount of subjectivity and, therefore, only the previous criteria will be used.

II The Group

All players included in this study have played on the major league level for at least four seasons since 1900. The major league level is used since it is conceded to be the top level of baseball. Also, successful players remain at this level longer than at any other level.

III Sources

Three main sources were used to obtain complete records of all major league pitchers from 1900 through 1953.

(1) The Official Encyclopedia of Baseball¹ contained records of all players from 1900 through 1949: (2) Issues 1951, 1952 and 1953 of Who's Who in Baseball² were used to obtain records for seasons 1950, 1951 and 1952. (3) The Hartford Times³ contained pitcher's records in the year of 1953.

1. Turkin H. and S.C. Thompson. The Official Encyclopedia of Baseball (Jubilee Edition), A.S. Barnes Co. N.Y. 1951.

2. Bloodgood, Clifford, Who's Who in Baseball, Thirty-seventh Edition, Baseball Magazine Company, N.Y., 1952.

3. American and National League Pitching Records for 1953, November, 1953, Hartford Times.

Chapter IV

PROCEDURES

The total number of wins plus the per cent totals for each group were gathered. These totals were then divided by the number in each group. Later, each group was placed on a chart to vividly show each particular trend. In all, 488 players were involved in this study.

Only the first four years or seasons were used in arriving at a trend for the four to six year group. This procedure followed in all the other groups.

An adding machine was used to arrive at the mean scores of each group.

Predictions will be made of future performance of some present-day pitchers. These predictions are made on the basis of findings in this study.

Chapter IV-BPRESENTING AN ANALYSIS OF DATA

This chapter includes summary tables of all statistics arrived at in this study. A table will be made for each time-group. This table will include both the win totals and the per cent of the time-group for each group. The change from the previous year, up or down, will be represented by a plus or minus. Under each table is included a short analysis of the table, pointing out certain significant characteristics. These summary tables are derived from individual won and loss records which are included in the appendix of this study.

On the pages following each table will be graphs illustrating the trends of the pitchers.

TABLE 1 Summary of Wins for fifteen pitchers in the Sixteen-Year Group

<u>Year</u>	<u>Mean of Wins</u>	<u>Change Over Previous Year</u>
1	11	
2	15	Plus 4
3	16	Plus 1
4	20	Plus 4
5	17	Minus 3
6	18	Plus 1
7	20	Plus 2
8	17	Minus 3
9	17	0
10	14	Minus 3
11	16	Plus 2
12	16	0
13	14	Minus 2
14	13	Minus 1
15	12	Minus 1
16	10	Minus 2

HARMONIC MEAN 16

Analysis of table 1

1. The lowest win total was in the last year and the second lowest occurred in the first season.
2. Almost all other seasons were much higher in the total number of wins.
3. The greatest increase was made in the second and fourth seasons.
4. The sharpest drops are in the fifth, eighth, and tenth seasons.
5. The peak seasons were the fourth and seventh.

TABLE 1A Summary of the Per Cent of fifteen Pitchers in the Sixteen Year Group

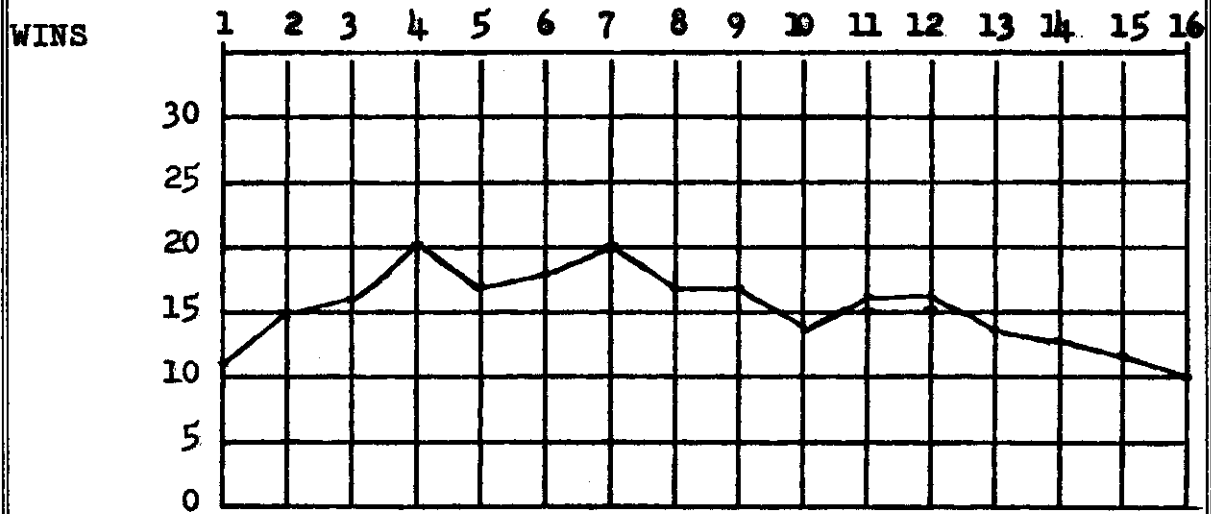
<u>Year</u>	<u>Mean of Annual Percentages</u>	<u>Change over Previous Year</u>
1	.505	
2	.531	Plus .026
3	.560	Plus .029
4	.579	Plus .019
5	.579	.000
6	.609	Plus .030
7	.615	Plus .006
8	.577	Minus .038
9	.557	Minus .020
10	.545	Minus .012
11	.606	Plus .061
12	.605	Minus .001
13	.622	Plus .017
14	.609	Minus .013
15	.507	Minus .112
16	.517	Plus .010

HARMONIC MEAN .570

Analysis of table 1A

1. The first year was the poorest year while the next to last year was the second worst.
2. A gradual rise occurs from the first year through the sixth year.
3. The sharpest drop occurred between the fourteenth year and the fifteenth years.
4. The greatest increase was made in the eleventh season.
5. The peak year is reached in the thirteenth season.

SIXTEEN YEAR AND OVER WIN GRAPH



SIXTEEN YEAR AND OVER PERCENTAGE GRAPH

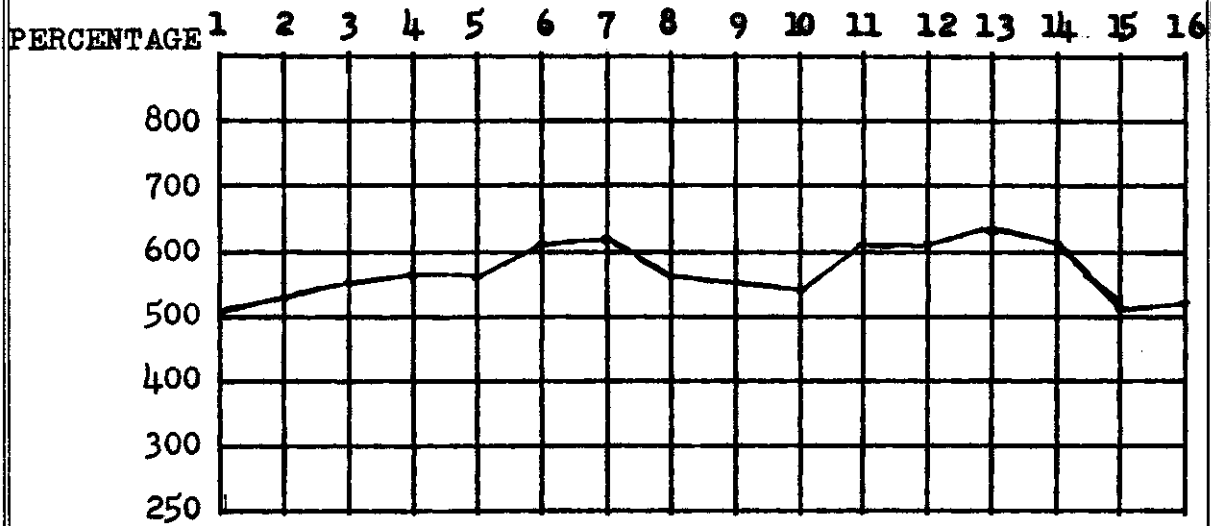


TABLE 2 Summary of Wins for thirty-five pitchers in the
Thirteen to Fifteen Year Group

<u>Year</u>	<u>Mean of Wins</u>	<u>Change over previous yr.</u>	
1	10		
2	12	Plus	2
3	14	Plus	2
4	14		0
5	16	Plus	2
6	14	Minus	2
7	14		0
8	15	Plus	1
9	14	Minus	1
10	13	Minus	1
11	12	Minus	1
12	11	Minus	1
13	9	Minus	2

HARMONIC MEAN 13

1. The lowest win total occurs in the last season.
2. There is a noticeable downward movement after the 8th season.
3. The peak is reached in the fifth season.
4. The greatest decrease took place in the sixth and thirteenth seasons.

TABLE 2A Summary of the Per Cent of Thirty-five Pitchers in the Thirteen to Fifteen Year Group

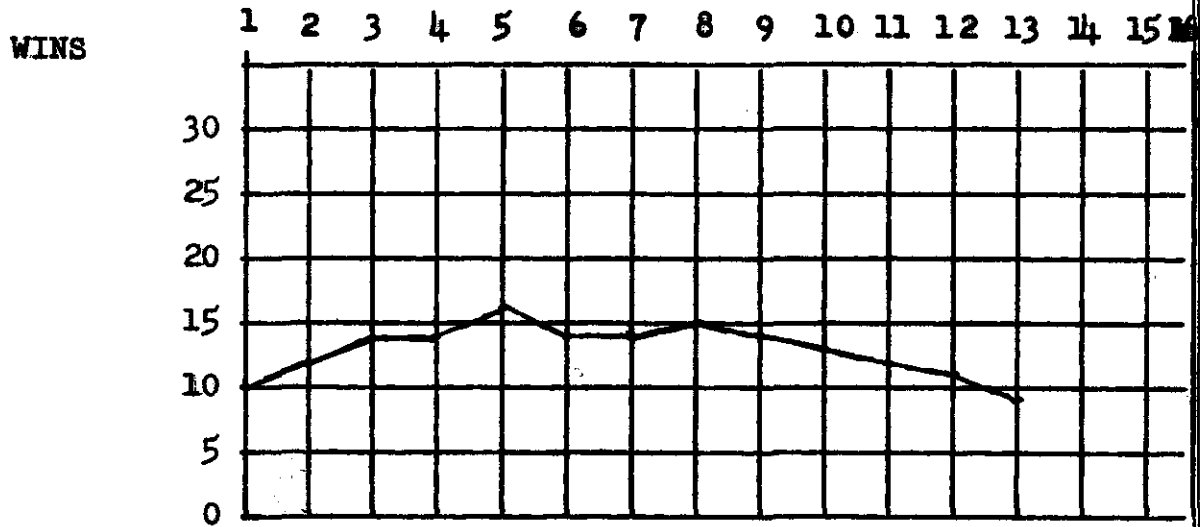
<u>Year</u>	<u>Means of Annual Per Cent</u>	<u>Change over Previous Year</u>
1	.566	
2	.509	Minus .063
3	.534	Plus .025
4	.534	.000
5	.556	Plus .022
6	.527	Minus .029
7	.550	Plus .023
8	.567	Plus .017
9	.570	Plus .003
10	.552	Minus .018
11	.539	Minus .013
12	.566	Plus .036
13	.505	Minus .061

HARMONIC MEAN .544

Analysis of table 2A

1. The highest percentage comes in the ninth year.
2. The greatest drop comes in the second year while another huge drop appears in the last year.
3. The lowest percentage is in the last year.
4. The second lowest score is reached in the second year.

THIRTEEN TO FIFTEEN YEAR WIN GRAPH



THIRTEEN TO FIFTEEN YEAR PERCENTAGE GRAPH

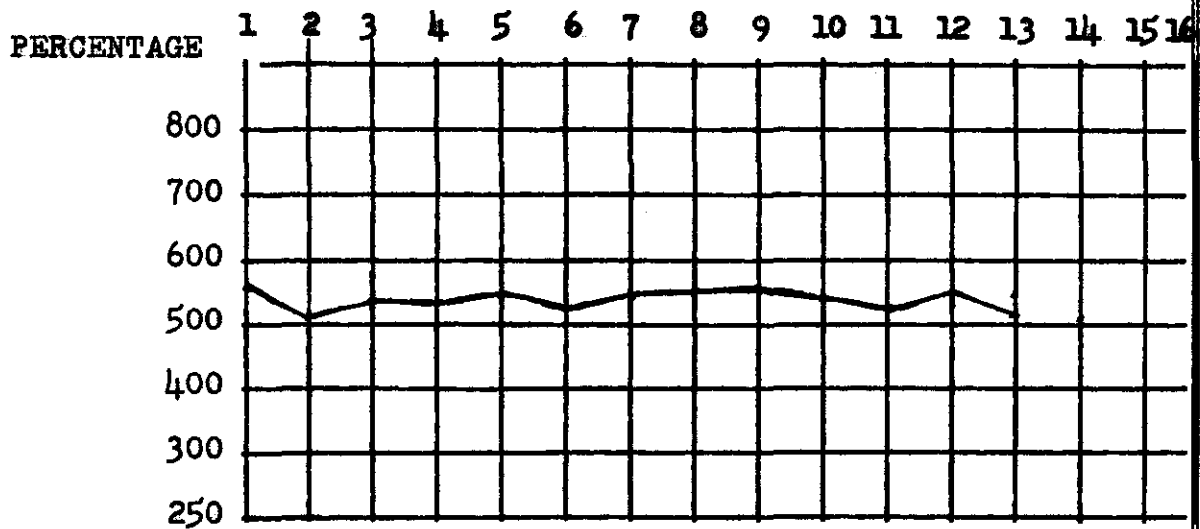


TABLE 3 Summary of Wins for Sixty-six pitchers in the
Ten to Twelve Year Group

<u>Year</u>	<u>Means of Annual Wins</u>	<u>Change over</u> <u>Previous year</u>
1	9	
2	14	Plus 5
3	13	Minus 1
4	14	Plus 1
5	14	0
6	14	0
7	13	Minus 1
8	12	Minus 1
9	11	Minus 1
10	10	Minus 1

HARMONIC MEAN 12

Analysis of table 3

- 1.. The lowest win total was in the first year while the last year had the second fewest games won.
- 2.. A great rise came in the second year.
- 3.. After the sixth year there is a gradual decline.
- 4.. The peak years appears in the second, fourth, fifth and sixth years.

TABLE 3A Summary of the Per Cent of Sixty-six pitchers in the Ten to Twelve Year Group

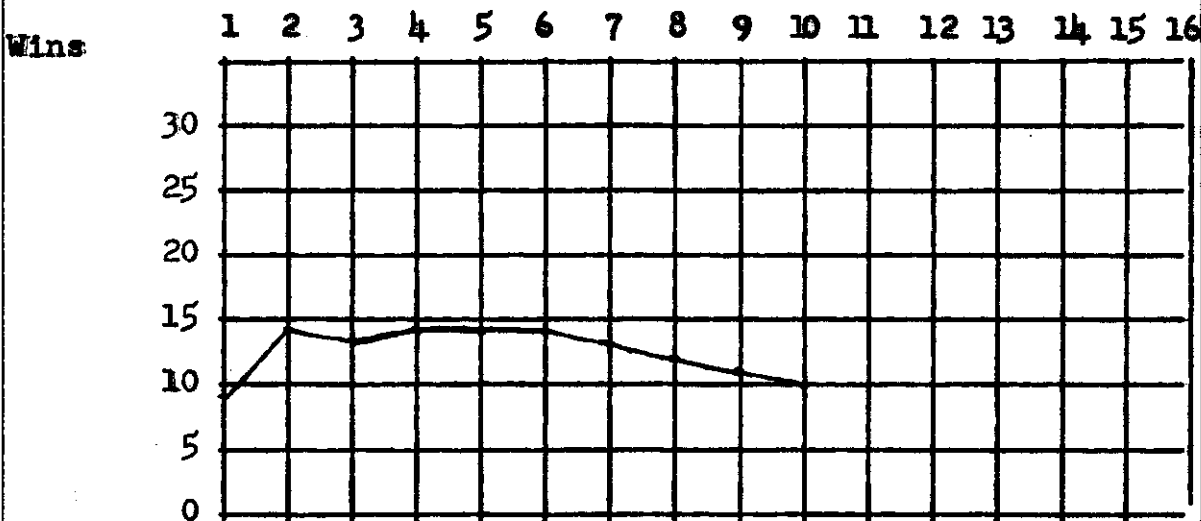
<u>Year</u>	<u>Means of Annual Percentages</u>	<u>Change over Previous year</u>
1	.486	
2	.561	Plus .075
3	.540	Minus .021
4	.553	Plus .013
5	.552	Minus .001
6	.554	Plus .002
7	.545	Minus .009
8	.546	Plus .001
9	.537	Minus .009
10	.544	Plus .007

HARMONIC MEAN .542

Analysis of table 3A

1. The lowest year was the first while the largest percentage occurred in the second year.
2. The greatest rise occurred in the second season.
3. The greatest decline was in the third season.
4. A peak is reached in the second year.

TEN TO TWELVE YEAR WIN GRAPH



TEN TO TWELVE YEAR PERCENTAGE GRAPH

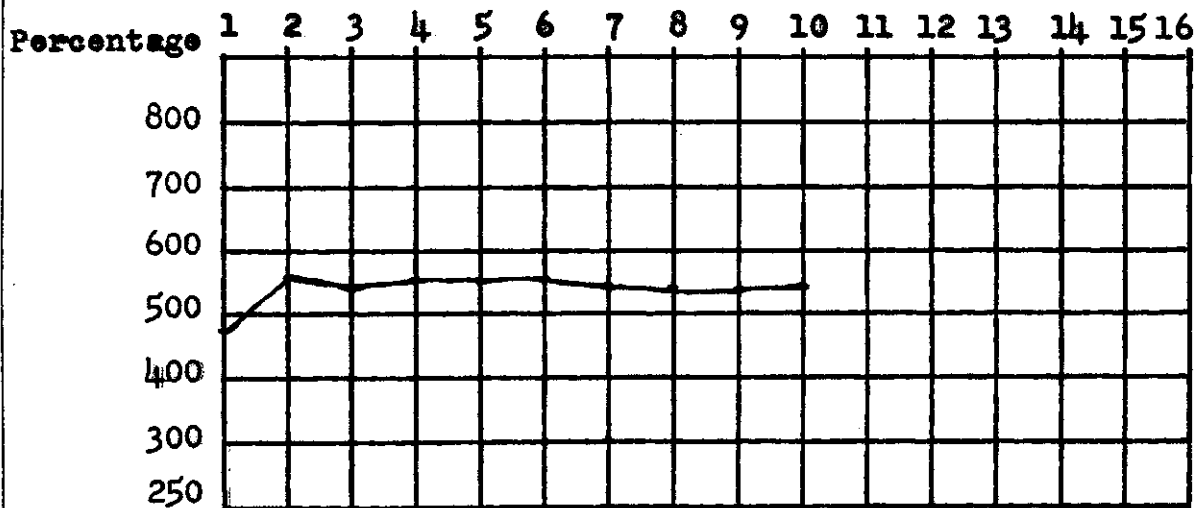


TABLE 4 Summary of Wins for One hundred and ten Pitchers
In the Seven to Nine Year Group

<u>Year</u>	<u>Means of Annual Wins</u>	<u>Change over</u> <u>Previous Year</u>
1	10	
2	12	Plus 2
3	13	Plus 1
4	12	Minus 1
5	12	0
6	11	Minus 1
7	9	Minus 2

HARMONIC MEAN 11

Analysis of table 4

1. The lowest total was in the last year while the previous low was in the first year.
2. The highest total was attained in the third season.
3. The greatest rise was in the second year.
4. While the greatest decline occurred in the seventh year.

Table 4A Summary of the Per Cent of One hundred and Ten Pitchers in the Seven to Nine Year Group

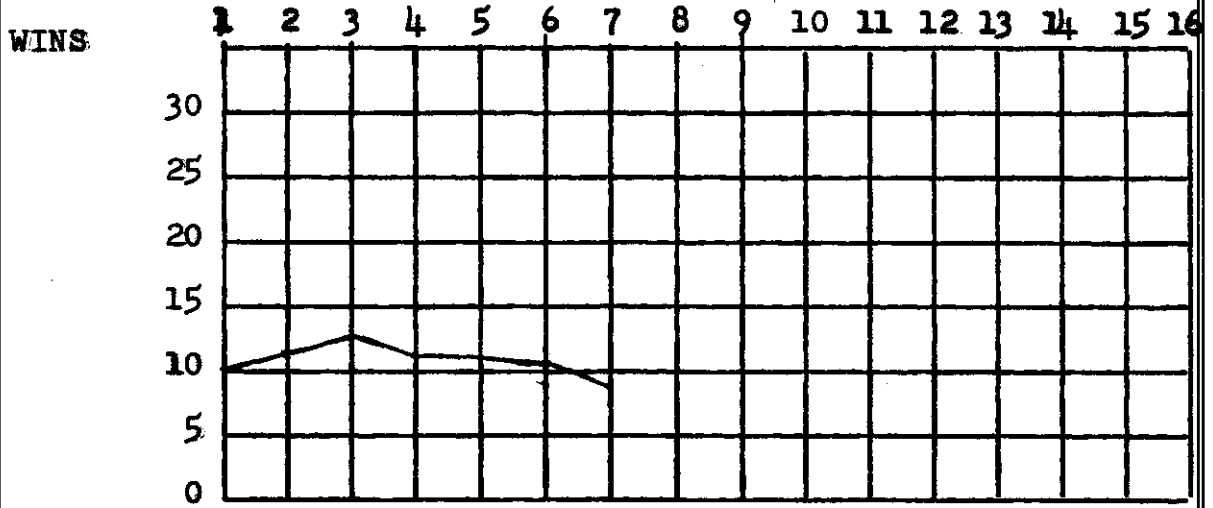
<u>Year</u>	<u>Means of Annual Percentages</u>	<u>Change over Previous Year</u>
1	.497	
2	.512	Plus .015
3	.518	Plus .006
4	.532	Plus .014
5	.521	Minus .011
6	.514	Minus .007
7	.490	Minus .024

HARMONIC MEAN .512

Analysis of Table 4A

1. The peak for this group was reached in the fourth season.
2. The lowest per cent was in the last season.
3. The greatest decline occurred in the last season.
4. The greatest rise was in the second year.
5. There was a sharp decline from the fourth season through the seventh.

SEVEN TO NINE YEAR GROUP



SEVEN TO NINE YEAR PERCENTAGE GRAPH

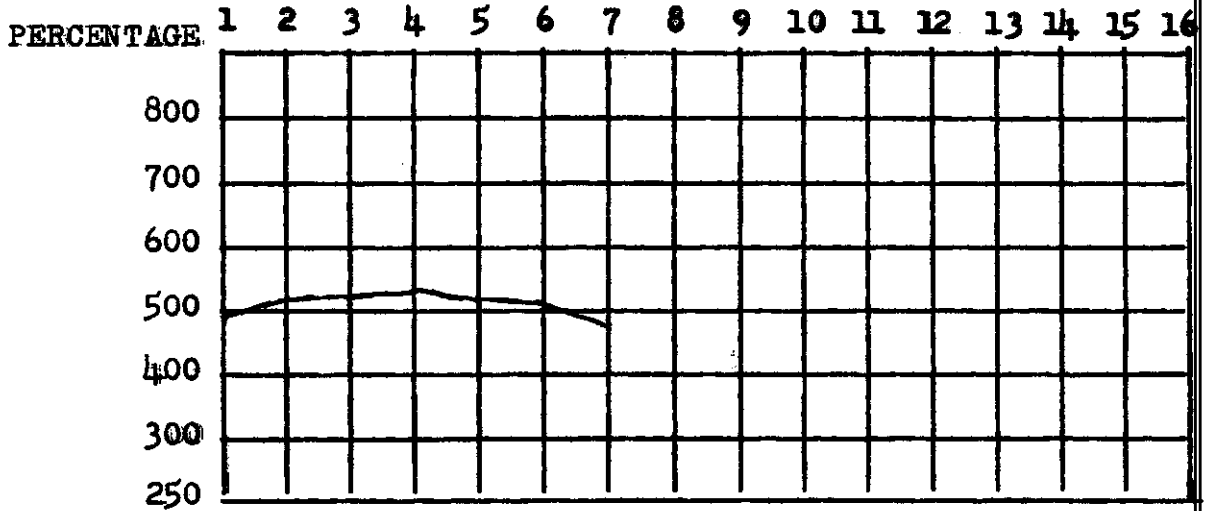


TABLE 5 Summary of Wins for Two hundred and Forty-five
Pitchers in the Four to Six Year Group

<u>Year</u>	<u>Means of Annual Wins</u>	<u>Change over</u> <u>Previous year</u>
1	10	
2	11	Plus 1
3	11	0
4	9	Minus 2

HARMONIC MEAN 10

Analysis of table 5

1. The peak is reached in the second and third seasons.
2. The lowest total occurs in the fourth year.
3. A decline occurs in the last season of play.

TABLE 5A Summary of the Per Cent of Two hundred Forty-five
Pitchers in the Four to Six Year Group

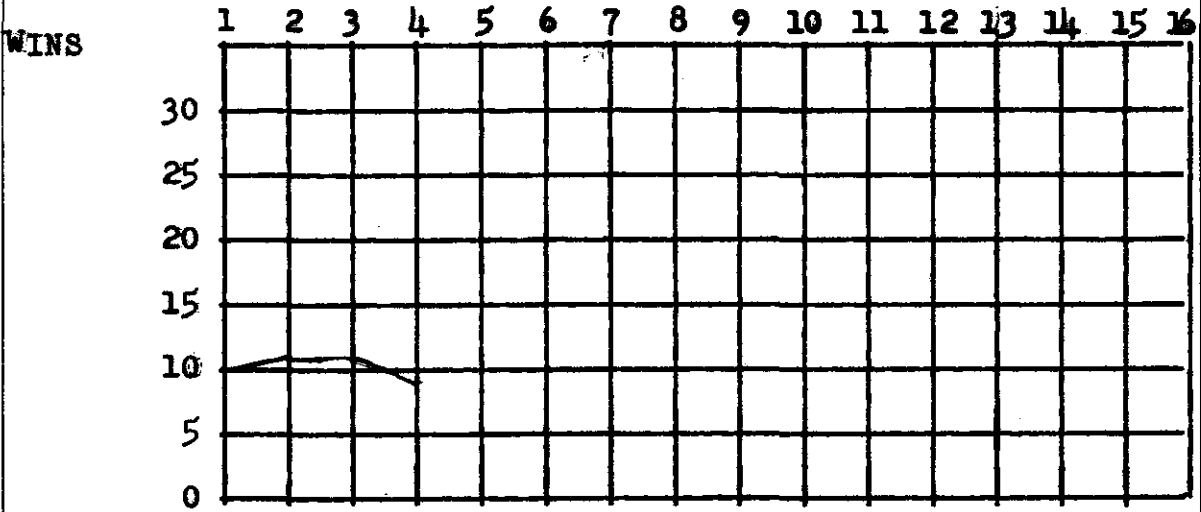
<u>Year</u>	<u>Means of Annual Percentages</u>	<u>Change over Previous</u> <u>Year</u>
1	.515	
2	.506	Minus .009
3	.502	Minus .004
4	.483	Minus .019

HARMONIC MEAN .501

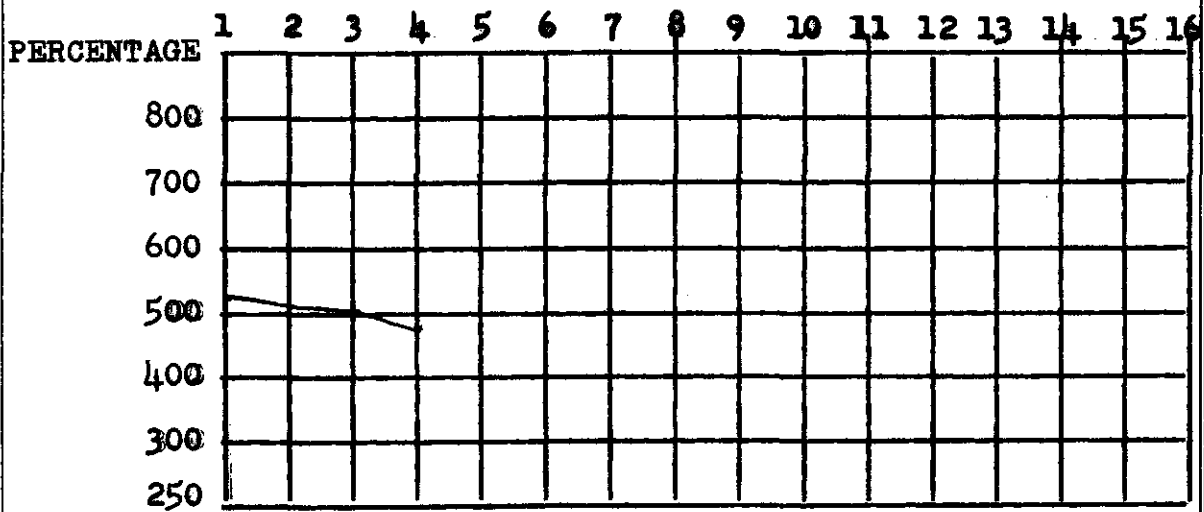
Analysis of Table 5A

1. The peak is reached in the first year.
2. There is a steady decline from the first season through the fourth season.
3. The greatest decline appears in the fourth year.

FOUR TO SIX YEAR WIN GRAPH



FOUR TO SIX YEAR PERCENTAGE GRAPH



CHAPTER V

SUMMARY AND CONCLUSION

1. Summary

To predict the future performance of an individual, in any phase of work or play, is difficult. Certain traits are peculiar to each person. A person's interests, age, abilities, determination, and other qualities, must be taken into account before predictions can be made. This study assumes that these variables are in many ways similar, at the major league level.

It was found in this study that trends made in the first four years had a definite bearing upon a player's future performance and his length of play in the major leagues. The short term players, those playing from four to six years, reach their peak in their first year and ebbed downward reaching a low in their last season. The sixteen year group enjoyed their finest win total in their fourth and seventh seasons, but did not attain their greatest height in percentage until their thirteenth season of play. The thirteen through fifteen year group reach a peak in win total in their fifth season and their highest percentage in their ninth year. The ten through twelve year group did not reach a definite peak, but rather a plateau in their win total, in the fourth through the sixth season. In percentage totals they reach a peak in their second season.

The seven through nine year group hit a percentage peak in their fourth season and the peak win total came in the third year.

In every case, with the exception of one, a general rule held; once a player had a lower win total or percentage mark below his first season his career was at an end. The exception appeared in the thirteen to fifteen group percentage total.

This study found an interesting point, that being, the disapprovable of the "Sophomore Jinx" theory, that most ball players do not play as well in their second year as they did in their first year. This was only found true in two cases. The thirteen and fifteen year group and the four to six year group receded in their second seasons; but in all other cases there was a definite rise in the second season of play.

It was found that the age of the pitcher does not play as great a part in the length of the player's baseball life as people believe. Many players included in this study dropped out of the majors between the twenty-seven and thirty-five year line, while others remained and performed well past forty.

2. Conclusions

1st Major-League Season - Oddly enough, there is a very slight difference seen in the win totals for the five groups studied. The sixteen year group does have a small increase

over the other group, which are just about similar. In percentage, can be found the interesting fact that the low term group is far below other groups.

2nd Major-League Season - A gradual rise in this year seems to predict a long future; a drop tends to point a discouraging future.

3rd Major-League Season - The sixteen and thirteen to fifteen year group continues its upward movement while all others reach a plateau, or fade, in win and percentage totals. This **third** season seems to indicate rather vividly whether a pitcher will be a long term player or fade from major league competition early.

4th Major-League Season - The four to six year group climbs below its first season. The sixteen year group now reaches its first peak in games won and continues to rise in percentage. This same rise can be seen in the ten to twelve year group. While the seven to nine year group hits a peak in percentage and starts its decline in the number of wins.

5th Major-League Season - This year is significant since the **thirteen to fifteen** year group reaches its peak; it also makes advances in percentage. A plateau or decline prevails in all other groups.

6th Major-League Season - For the most part this is a declining season. ~~The sixteen year group shows a slight rise in the~~

number of wins, while the ten to twelve year group still maintains its even level.

7th Major-League Season - The sixteen year group hits its second peak in wins and shows a definite upward trend in percent. The thirteen year group shows a slight upward trend and, significantly, other groups decline greatly.

8th Major-League Season - The thirteen year group heads upward in percentage while all others start a decline.

9th Major-League Season - The thirteen year group reaches a percentage peak in this season while it starts its downward trend in wins. The sixteen year group ebbs downward as all the other groups do.

10th Major-League Season - Groups show a decline in games won and in percentage, with the exception of the ten to twelve year group which shows a rise in its last year.

11th Major-League Season - This is a significant year since the sixteen year group shows a definite rise, while the thirteen to fifteen year group is faltering.

12th Major-League Season - A plateau is reached by the longer term group, while the thirteen year group has an upward trend in percentage.

13th Major-League Season - While the thirteen year group is sinking beyond its previous low the sixteen year group hits its highest mark in percentage.

14th, 15th, and 16th Major-League Season - A decline is shown in the number of games won. The last season falling below the first season of play. A sharp drop in percentage follows, but in the last year a slight rise is apparent.

Combined Group Trends - On pages 25 and 26 of this study are graphs of the win totals and the percentage of each group. This study will be more clearly understood when all trends can be seen in relation to one another.

3. Predictions

Predictions will be made as to the future pitching performance of some present-day major league pitchers. These predictions will be made on the basis of the findings of this study. The player will be compared to particular groups. Both the trends in the number of games won and the percentage will be used as a predicting device.

Two graphs will be included on each page. The player will be compared to the two graphs and a conclusion will be given on the following page. Five present players will be used to illustrate how predictions can be made on the basis of this study.

4. Suggestions for Future Research

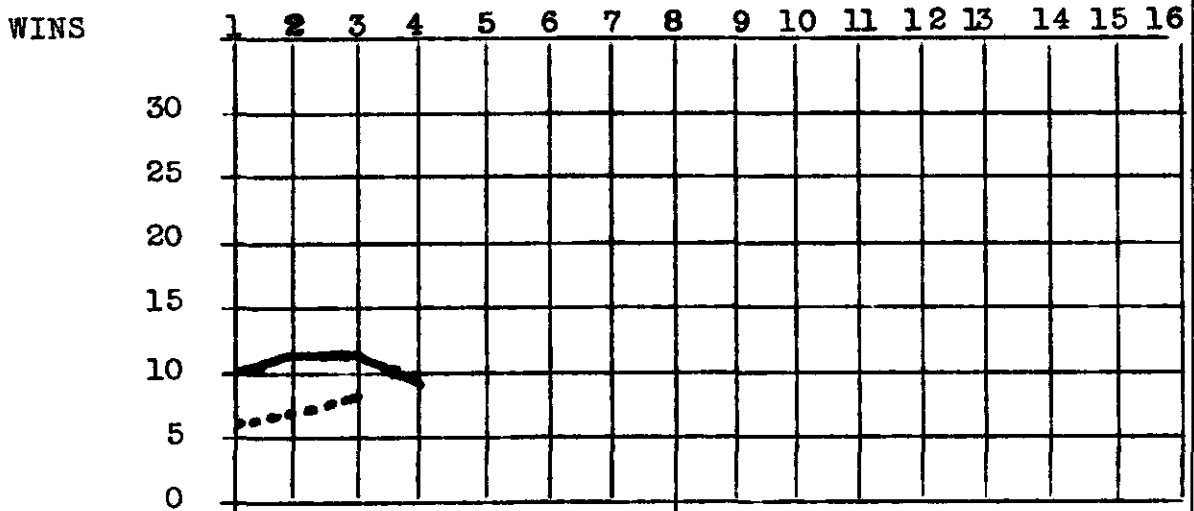
A study of innate capacities of major league baseball players with the aid of scientific devices. The test could include: Test of reaction time, peripheral vision, depth perception, and other scientific measurements now available.

A study of the relationship of earned run averages and the number of games won during a season.

A study and predictive measure for determining the winning team in each of the major leagues, using an objective measuring stick.

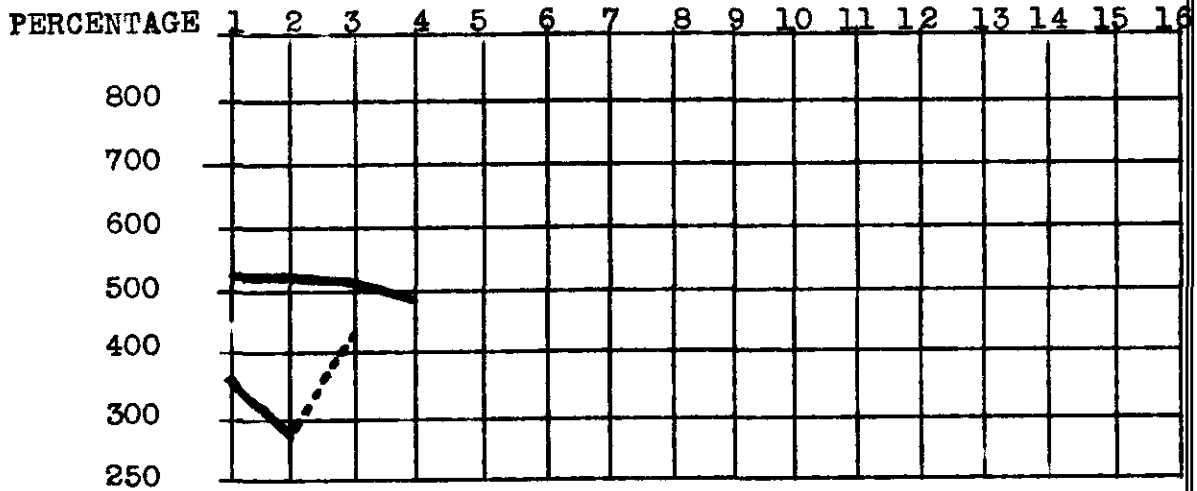
ROBERT FRIEND COMPARED TO THE FOUR TO SIX YEAR GROUP

WIN GRAPH



ROBERT FRIEND COMPARED TO THE FOUR TO SIX YEAR GROUP

PERCENTAGE GRAPH



The Group _____

Friend -----

ROBERT FRIEND COMPARED TO THE FOUR TO SIX YEAR GROUP

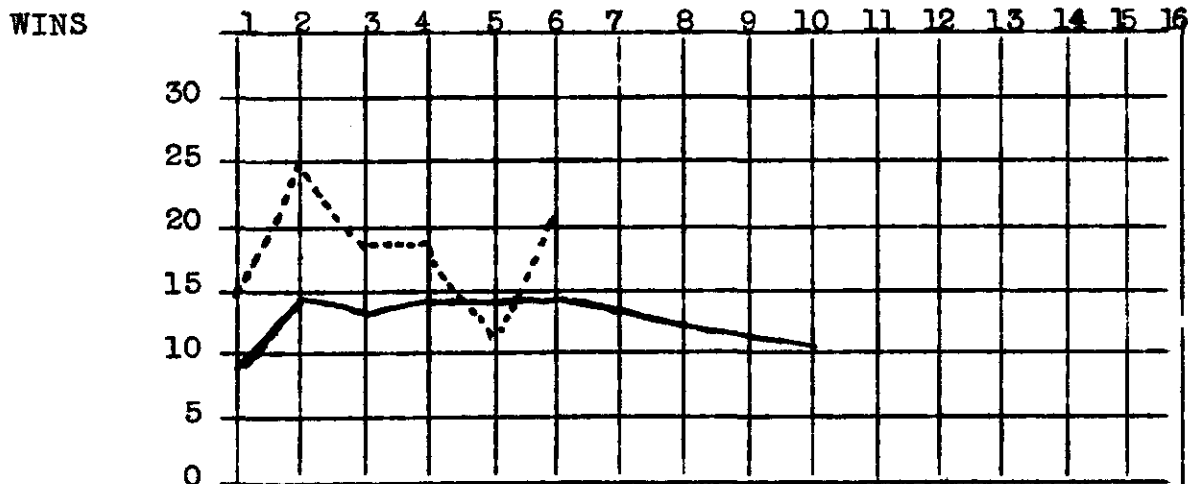
The only true difference between Friend's win and percentage totals and that of the group appears in the percentage totals of the third season. A gradual rise, a plateau and a drop in win totals is closely followed by the individual. The important fact is both in the win and the percentage totals; Friend falls far short of the group.

Prediction

The win total of the individual should experience a drop; this trend will also be seen in the percentage totals. Next year will probably witness the end of Friend's short pitching career.

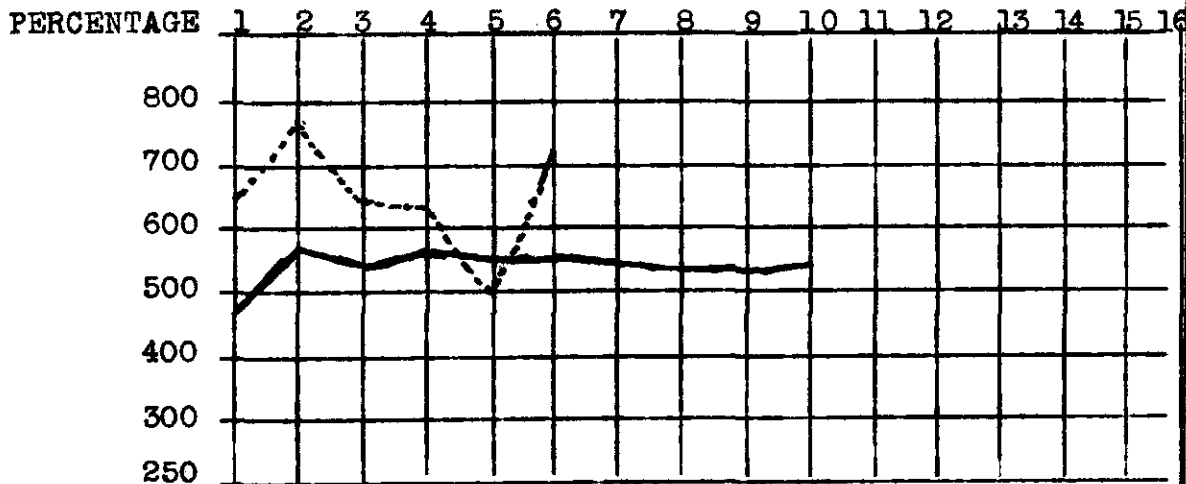
MELVIN PARNELL COMPARED TO THE TEN TO TWELVE YEAR GROUP

WIN GRAPH



MELVIN PARNELL COMPARED TO THE TEN TO TWELVE YEAR GROUP

PERCENTAGE GRAPH



The Group _____

Parnell -----

MELVIN PARNELL COMPARED TO THE TEN TO TWELVE YEAR GROUP

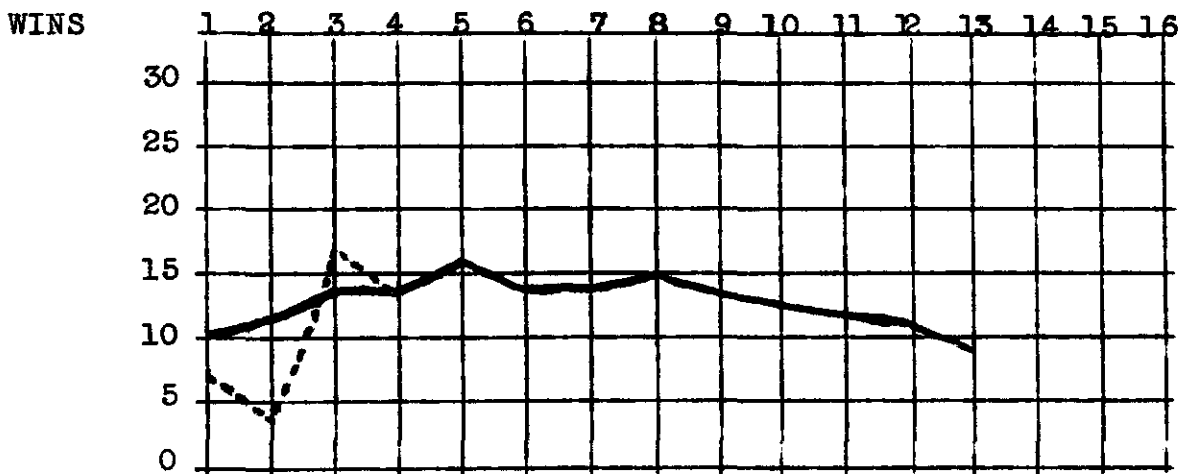
Parnell follows the trend of the ten to twelve year group very closely. The only true deviation from the group occurs in that he shows a much higher win and percentage totals. A sharp rise in the second season is an outstanding feature of the group. The individual drops in his third season as does the group. The sixth season shows a rise which closely resembles the high mark reached in the second season.

Prediction

Parnell will show a gradual drop in his remaining seasons. Both his win and percentage have reached their second peak, and all we can look for is a dropping off until his career comes to an end. As a result of his high totals, he may succeed in remaining beyond this group by a season or two.

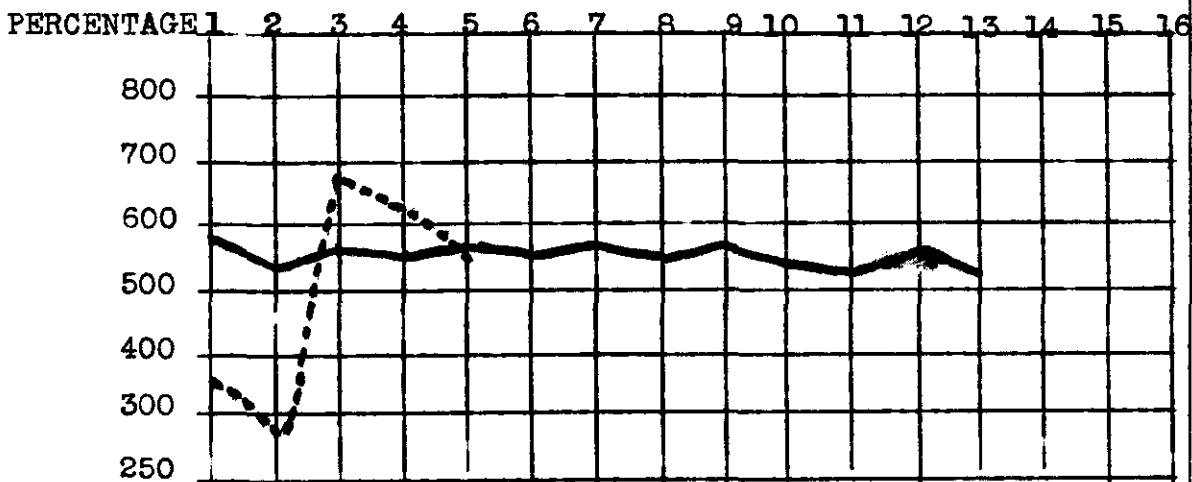
CURT SIMMONS COMPARED TO THE THIRTEEN TO FIFTEEN YEAR GROUP

WIN GRAPH



CURT SIMMONS COMPARED TO THE THIRTEEN TO FIFTEEN YEAR GROUP

PERCENTAGE GRAPH



The Group _____

Simmons -----

CURT SIMMONS COMPARED TO THE THIRTEEN TO FIFTEEN YEAR GROUP

An outstanding feature of the group is a drop in percentage in the second year. Although the individual has has a lower win and percentage totals his trends bear a great resemblance to that of the group.

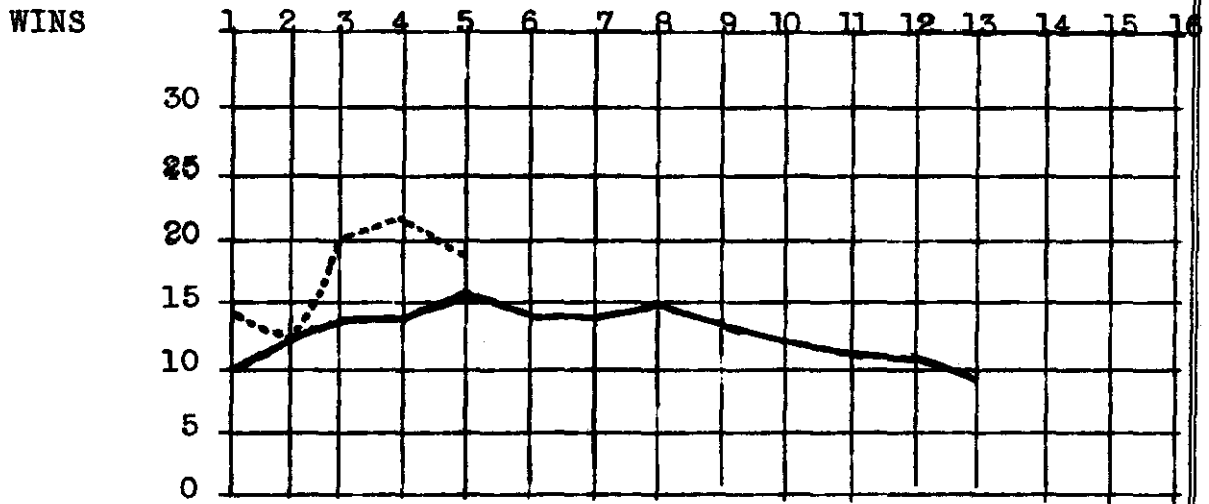
Prediction

Simmons will show an increase in wins for a season or two, following this increase, a drop will occur. After the decline a rise will be seen, and will become his second peak.

The percentage total will increase for the next few seasons hitting a peak around the ninth season.

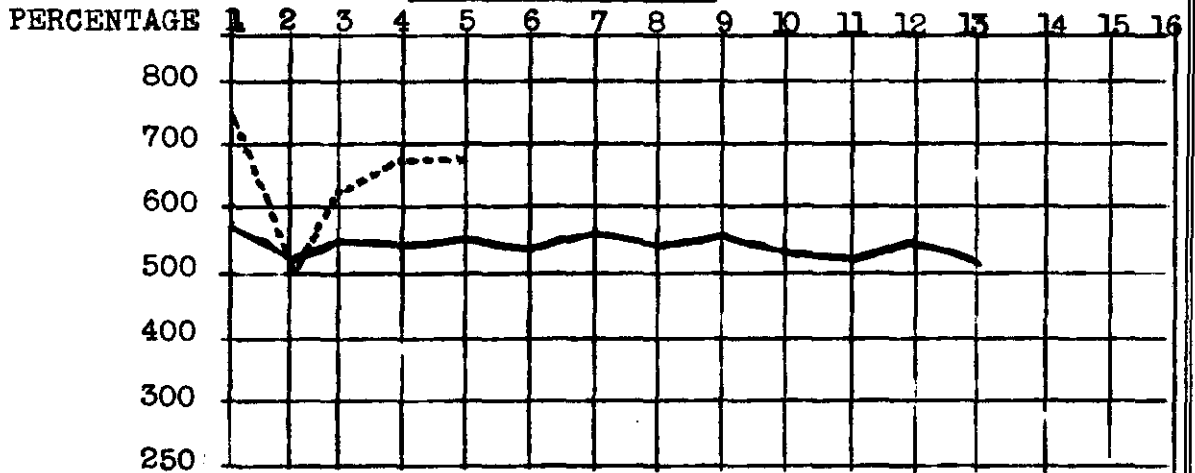
MIKE GARCIA COMPARED TO THE THIRTEEN TO FIFTEEN YEAR GROUP

WIN GRAPH



MIKE GARCIA COMPARED TO THE THIRTEEN TO FIFTEEN YEAR GROUP

PERCENTAGE GRAPH



The Group _____

Garcia -----

EDWARD GARCIA COMPARED TO THE THIRTEEN TO FIFTEEN YEAR GROUP

There are many indications which lead to the belief that Garcia belongs in the thirteen to fifteen year group. The drop in percentage in the second year is peculiar to this group alone. The highest percentage of the first seven years occurs in the very first season. A resemblance is to be seen in the five years of the individual win totals.

Garcia has higher win and percentage totals than the group, but he follows and will follow the trend of the thirteen to fifteen year group.

Prediction

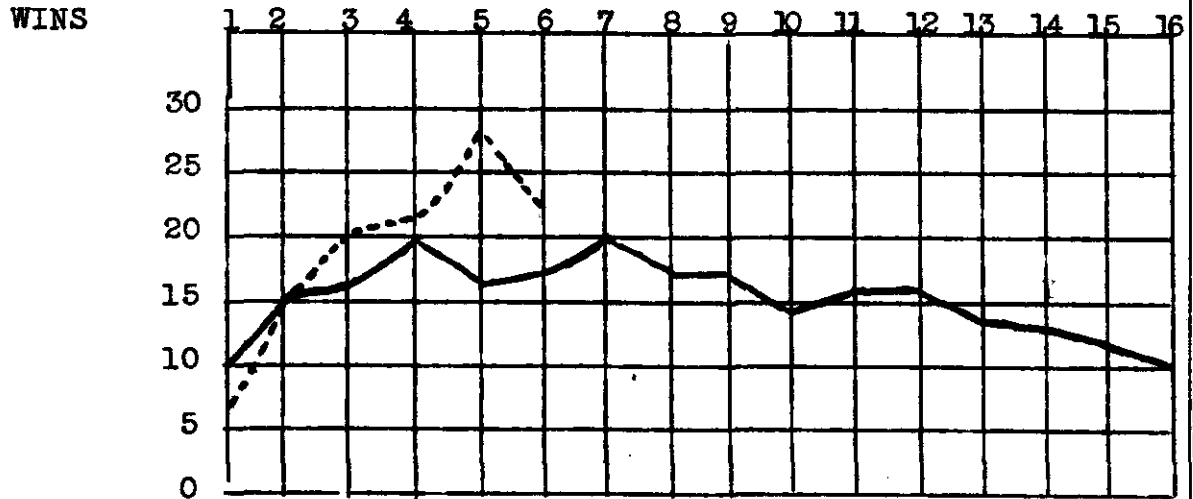
In win totals a plateau or a slight rise will occur in the next season. Within the next three seasons a second peak will be reached. After this, a decline will follow until his career is at an end.

A decline will come in the next season and within the next four seasons a peak should be reached which will equal or surpass the previous high made in the first season.

ROBIN ROBERTS COMPARED TO THE SIXTEEN

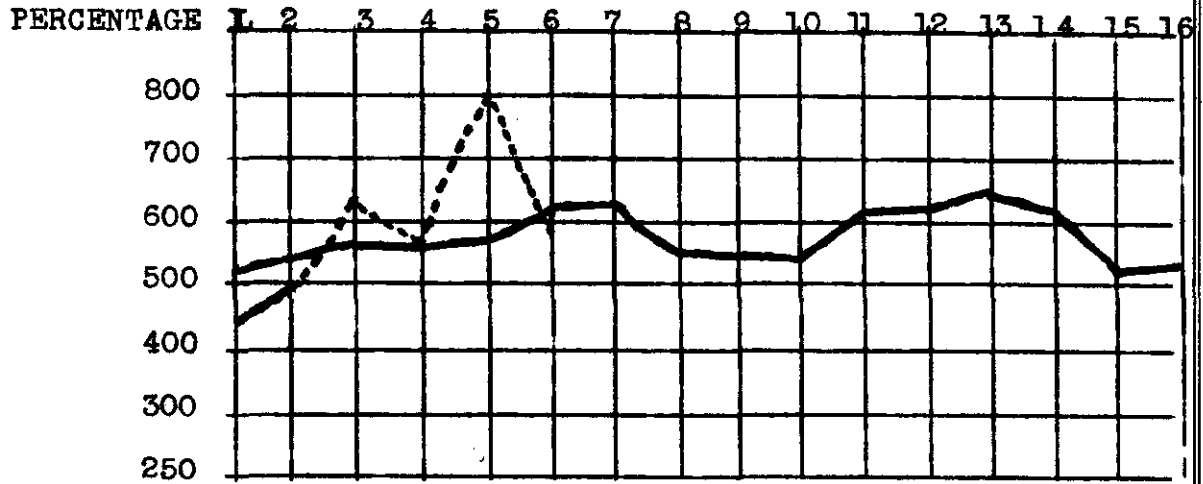
YEAR GROUP

WIN GRAPH



ROBIN ROBERTS COMPARED TO THE SIXTEEN YEAR GROUP

PERCENTAGE GRAPH



The Group _____

Roberts - - - - -

ROBIN ROBERTS COMPARED TO THE SIXTEEN YEAR GROUP

In comparing the win total of Roberts and the sixteen year group, it can be seen that the trends are followed. Roberts reached his first peak in the fifth year while the group reached theirs in the fourth season. This seems to indicate that Roberts will reach his second high mark a season or two after the group. It can be readily seen the individuals total is higher than the group.

Roberts percentage record reached a peak sooner than that of the group and also has taken a downward trend before that of the group. This would indicate that we may look for an early rise in percentage. This rise should come near matching or surpassing his previous high.

Prediction

The next season will find a slight increase in win totals. This rise will continue until a second peak is reached in the eighth or ninth season.

As the individual reached his peak, and since a drop came before the group, it can be concluded that a rise in percentage will take place. This rise will continue over several seasons until a second peak is reached somewhere around the tenth or eleventh season.

OBJECTIVE ANALYSIS

Experiment #1

At this point in the thesis, Dr. Harmon, suggested an objective investigation of the information presented. This writer, with the guidance of Professor Noether, of the Boston University, Mathematics Department, started a statistical investigation.

The first experiment involved the testing of the hypothesis that a season of any group would not deviate from the same group more than .05. If the hypothesis proved correct, it would indicate there is little fluctuation, whereas the disproval of the hypothesis would indicate a large fluctuation between the selected season and the group. The 4th, 5th, and 8th seasons, were selected by placing numbers in a box and selecting them at random. Each of the seasons selected will be compared with each group using the formula:

$$Mx = My$$

$$T = \sqrt{\frac{Nx Sx^2 + Ny Sy^2}{Nx + Ny - 2}} \times \left(\frac{1}{Nx} + \frac{1}{Ny} \right)$$

By-and-large the results disproved the hypothesis, but there was a strong indication that a greater sampling would give a different results, this is especially true of the sixteen year and thirteen to fifteen year groups.

Experiment #2

The next attempt was to calculate the probability that

a performer would fall in a particular group. When each group was compared to the other groups the results was:

	<u>Probability</u>
4-6 compared to 7-9 year group -----	3 to 0
7-9 compared to 10-12 year group ----	6 to 1
10-12 compared to 13-15 year group ----	6 to 4
13-15 compared to the 16 and over year group	10 to 3

Although the results seem to indicate a worthwhile conclusion, when computed with the probability table it was found insignificant. This was caused by a lack of sufficient numbers that were available. It would be impossible to add to the number of seasons; since this study only covers the players up to the sixteenth year.

Experiment #3

Dr. Noether and this writer concluded that a chart could be constructed showing the upward and downward of percentage trends of each group. From this chart we seek to estimate the probability of (2) players of (2) different groups changing in the same direction from one year to the next.

A large probability will indicate there is no appreciable difference between two groups whereas a low percentage would indicate that there is a worthwhile difference in the groups.

PROBABILITY PERCENTAGE CHART

Yrs.	16 yr. group	13-15 yr. group	10-12 yr. group	7-9 yr. group	4-6 yr. group
2	+	X	-	X	+
3	+	X	+	X	-
4	+	X	-	X	+
5	-	X	+	X	-
6	+	X	-	X	+
7	+	X	+	X	-
8	-	X	+	X	+
9	-	X	+	X	-
10	-	X	-	X	+
11	+	X	-		
12	-	X	+		
13	+	X	-		

PERCENTAGE

25%

11%

66 2/3%

0%

*A toss of a coin determine whether an even year was a plus or a minor season.

This would seem very definitely to show that there is no or very little similarity of trends. Thus it may be concluded that the trends of the different groups have their own particular pattern.

APPENDIX

FOUR TO SIX YEAR GROUP

ADAMS, Townsend (1941-1946)	4-1	7-4	11-7	8-11
ALLEN, Frank Lee (1912-1917)	3-9	4-18	8-14	8-2
ALTROCK, Nicholas (1902-1924)	19-14	21-10	20-13	8-12
ANDERSON, John (Fred) (1909-1918)	13-15	19-13	9-13	8-8
ANDREWS, Ivy P. (Poison) (1931-1938)	8-6	7-13	4-11	13-7
BAILEY, William F. (1909-1922)	2-5	9-11	3-18	4-15
BARGER, Eros B. (cy) (1906-1915)	15-15	11-15	10-16	9-8
BARNES, Virgil J. (Zeke) (1919-1928)	1-0	2-3	16-10	15-11
BAYNE, William L. (Beverly) (1919-1930)	11-5	4-5	1-3	2-5
BEDIENT, Hugh C. (1912-1915)	20-10	15-14	8-12	16-18
BEEBE, Frederick L. (1906-1916)	9-10	6-19	5-13	15-21
BEGGS, Joseph A. (Fireman) (1938 - 1948)	12-3	4-3	6-5	7-6
BEHRMAN, Henry Bernard (1946-1949)	11-5	5-3	5-4	3-3
BELL, George G. (Farmer) (1907-1911)	8-16	4-15	16-15	10-27
BENTLEY, John Needles (1913-1927)	5-7	13-8	16-5	11-9
BENZ, Joseph L. (Blitzen) (1911-1919)	14-18	7-10	14-19	15-11

FOUR TO SIX YEAR GROUP

BLANDING, Frederick J. (1910-1914)	7-11	18-14	15-10	3-9
BLANTON, Darrell E. (1934-1942)	18-13	13-15	14-12	11-7
BOEHLING, John Joseph (1912-1920)	17-7	12-8	13-13	8-11
BOLAND, Bernard Anthony (1915-1921)	13-6	10-3	16-12	14-10
BRAME, Ervin Beckham (1928-1932)	7-4	16-11	17-8	9-13
BRAXTON, Edgar G. (1921-1933)	1-2	5-1	10-9	13-11
BROACA, John Joseph (1934-1939)	12-9	15-7	12-7	4-2
BROWN, Charles E. (1905-1913)	8-12	8-16	5-5	9-23
BRYANT, Claiborne H. (1935-1940)	1-2	9-3	19-11	2-1
BURNS, William M. (1908-1912)	6-11	7-13	8-13	3-11
CADORE, Leon James (1915-1924)	13-13	14-12	15-14	13-14
CAIN, Merritt P. (1932-1938)	13-12	9-17	9-8	14-10
CALDWELL, Earl W. (1928-1948)	7-16	6-7	13-4	1-4
CARTER, Paul Warren (1914-1920)	5-8	3-2	5-4	3-6
CASTLEMAN, Clydell (1934-1939)	15-6	4-7	11-6	4-5

CAUSEY, Cecil A. (Red) (1918-1922)	11-6	9-3	7-14	4-3
CHANDLER, Spurgeon F. (Spud) (1937-1947)	14-5	8-7	10-4	16-5
CHASE, Kendall Fay (1936-1943)	9-10	10-19	15-17	6-18
CHIPMAN, Robert Howard (1941-1949)	9-9	4-5	6-5	7-6
COAKLEY, Andrew Joseph Also played under the name of (J. McAllister) (1902-1911)	20-8	6-8	17-16	8-18
COFFMAN, George D. (Slick) (1937-1940)	7-5	4-4	2-1	2-2
COLE, Bertram (1921-1927)	7-4	1-6	13-5	3-9
COLLINS, Raymond Williston (1909-1915)	13-11	11-12	14-8	19-8
CORRIDON, Frank J. (Fidler) (1904-1910)	11-13	18-14	14-10	11-7
COUMBE, Frederick N. (Fritz) (1914-1921)	4-7	7-5	8-7	13-7
COVELESKI, Harry F. (Giant Killer) (1907-1918)	6-10	22-12	23-13	23-10
CULLOP, Norman A. (Nick) (1913-1921)	15-19	22-11	13-6	6-9
CUNNINGHAM, George H. (1916-1921)	7-11	2-6	7-7	1-1
CVENGROS, Louis M. (Mike) (1922-1929)	12-13	3-12	3-9	2-1
DAVENPORT, Arthur D. (Davie) (1914-1919)	10-15	22-18	12-11	17-17
DAVIS, Frank T. (Dixie) (1912-1926)	18-12	16-16	11-6	11-13

DAVIS, Raymond T.(Peaches) (1936-1939)	8-8	11-13	7-12	1-0
DEAN, Jay H. (Dizzy) (1930-1947)	18-15	20-18	30-7	28-12
DECATUR, Arthur R. (1922-1927)	3-4	3-3	10-9	4-13
DESHONG, James Brooklyn (1932-1939)	6-7	4-1	18-10	14-15
DONALD, Richard A.(Swampy) (1938-1945)	13-3	8-3	9-5	11-3
DUBIEL, Walter J.(Monk) (1944-1949)	13-13	10-9	8-10	6-9
DUBUC, Jean Arthur (1908-1919)	17-10	16-14	13-14	17-12
DUDLEY, Elise Clise (1929-1933)	6-14	2-4	8-14	1-1
DUGGLEBY, William J. (1900-1907)	19-12	11-17	13-18	12-13
DURHAM, Edward F.(Bull) (1929-1933)	4-15	8-10	6-13	10-6
DYGERT, James Henry (1905-1910)	11-13	20-8	11-15	8-5
EASON, Malcolm Wayne (1900-1906)	8-14	11-14	5-21	10-17
EHRHARDT, Welton C.(Rube) (1924-1929)	10-14	2-5	3-7	1-3
EISENSTAT, Harry (1935-1942)	9-6	6-7	1-4	1-1
ELLER, Horace Owen(Hod) (1917-1921)	10-5	16-12	19-9	13-12
ELLIOTT, James T.(Jumbo) (1923-1934)	6-13	9-14	10-7	19-14
EMBREE, Charles W.(Red) (1941-1949)	8-12	8-10	5-3	3-13

ERICKSON, Eric George (1914-1922)	5-10	12-16	8-10	4-12
ERICKSON, Paul W. (Lil Abner) (1941-1948)	5-7	5-9	7-4	9-7
ERRICKSON, Richard M. (Leif) (1938-1942)	9-7	6-9	12-13	6-12
FALKENBERG, Fred P. (Cy) (1903-1917)	14-20	5-18	10-9	14-13
FANNIN, Clifford Bryson (1945-1949)	5-2	6-8	10-14	8-14
FELDMAN, Harry (1941-1946)	7-1	4-5	11-13	12-13
FERGUSON, Alexander (1918-1929)	9-16	9-13	14-17	4-2
FERGUSON, George Cecil (1906-1911)	2-1	11-11	5-23	7-7
FERRISS, David M. (Boo) (1945-1949)	21-10	25-6	12-11	7-3
FILLINGIM, Dana (1915-1925)	6-13	12-21	15-10	5-9
FISCHER, Charles W. (Carl) (1930-1937)	13-9	3-7	11-15	6-4
FLORES, Jesse Sandoval (1942-1947)	12-14	9-11	7-10	9-7
FORD, Russell W. (1909-1915)	26-6	22-11	13-21	11-18
FOSTER, George (Rube) (1913-1917)	3-4	14-8	20-9	14-7
FOWLER, Richard J. (1941-1949)	6-11	9-16	12-11	15-8

GALLIA, Melvin A. (Bert) (1912-1920)	2-5	16-10	17-15	9-13
GETTEL, Allen Jones (1945-1949)	9-8	6-7	11-10	8-10
GIBSON, Samuel Braxton (1926-1932)	12-9	11-12	5-8	4-8
GLADE, Frederick Monroe (1902-1908)	18-16	7-24	15-15	13-9
GLAZNER, Charles F. (1920-1924)	14-5	11-12	7-14	7-16
GORSICA, John Joseph P. (1940-1947)	7-7	9-11	3-2	4-5
GREENFIELD, Kent (1924-1929)	12-8	13-12	11-14	3-11
GREGG, Harold D. (Skeets) (1943-1949)	9-16	18-13	6-4	4-5
GREGG, Sylveanus A. (Vean) (1911-1925)	23-7	20-13	20-13	2-5
GROVE, LeRoy O. (Orvie) (1940-1949)	15-9	14-15	14-12	8-13
GUMPERT, Randall P. (1936-1949)	1-2	11-3	4-1	13-16
HAID, Harold Augustin (1919-1933)	2-2	9-9	3-2	0-2
HALL, Charles Louis (Sea Lion) (1906-1918)	12-9	8-7	15-8	4-4

HANSEN, Andrew V. (Swede) (1944-1949)	3-3	4-3	1-5	5-3
HANSEN, Roy Emil (Snipe) (1930-1935)	0-7	10-10	6-14	6-12
HARPER, Harry Claxton (1913-1923)	2-1	15-11	11-12	11-10
HARRIS, Charles L. (Lum) (1941-1947)	4-4	11-15	7-21	10-9
HARRIS, Maurice C. (Mickey) (1940-1949)	8-14	17-9	7-10	2-12
HEBERT, Wallace P. (Lefty) (1931-1943)	6-7	1-12	4-6	10-11
HERRING, Arthur L. (Red) (1929-1947)	3-3	7-13	1-2	7-4
HESS, Otto C. (1902-1915)	8-7	20-17	10-16	12-17
HUBBELL, Wilbur Wm. (1919-1925)	9-9	9-16	7-15	1-6
HUGHES, Thomas L. (1906-1918)	7-8	7-9	16-14	16-3
HUGHES, Thomas Owen (1941-1948)	9-14	12-18	6-9	4-11
HUGHSON, Cecil C. (Tex) (1941-1949)	22-6	12-15	18-5	20-11
HUMPHRIES, Albert (Bert) (1910-1915)	9-11	16-4	10-11	8-13
HUMPHRIES, John William (1938-1946)	9-8	12-12	11-11	8-10
HUTCHINSON, Frederick Chas. (1938-1949)	3-6	14-11	18-10	13-11
HUTCHINSON, Ira Kendall (1933-1945)	4-6	9-8	5-2	4-2
JACOBS, William Elmer (1914-1927)	6-10	6-19	4-8	11-12

JAMES, William H.(Big) (1911-1919)	15-14	7-11	7-12	13-10
JAVERY, Alva William (1940-1946)	2-4	10-11	12-16	17-16
JUDD, Thomas Wm.O.(Ossie) (1941-1948)	8-10	11-6	5-4	11-12
KARGER, Edwin (1906-1911)	6-11	15-19	4-9	11-7
KARL, Anton A. (Andy) (1943-1947)	3-2	8-8	3-7	2-3
KARR, Benjamin Joyce (1920-1927)	3-8	8-7	5-12	11-12
KEEN, Howard Victor (1918-1927)	12-8	15-14	2-6	10-9
KILLIAN, Ed H.(Twilight) (1903-1910)	15-20	22-14	9-6	25-13
KIMSEY, Clyde E. (Chad) (1929-1936)	3-6	6-10	4-6	4-2
KLIEMAN, Edward F.(Specs) (1943-1949)	11-13	5-8	5-4	3-2
KLINE, Robert G. (Junior) (1930-1934)	5-5	11-13	7-8	6-2
KNETZER, Elmer E. (Baron) (1909-1917)	7-5	11-12	7-9	20-12
KOOB, Ernest Gerald (1915-1919)	5-6	11-9	4-14	2-4
KRAKAUSKAS, Joseph V. L. (1937-1946)	7-5	11-17	1-6	2-5
LAKE, Joseph Henry (1908-1913)	9-21	14-11	11-18	11-15

LAWSON, Alfred V. (1930-1940)	8-6	18-7	8-9	3-7
LEIFIELD, Albert P. (1905-1920)	18-13	20-16	15-14	19-8
LEVERETTE, Gorham V. (1922-1929)	13-10	10-13	2-3	3-7
LINDSEY, James Kendrick (1922-1937)	4-5	7-5	6-4	3-3
LISENBEE, Horace M. (1927-1945)	18-9	10-17	5-12	1-3
LOHRMAN, William LeRoy (1934-1944)	9-6	12-13	10-15	9-10
LOMBARDI, Victor Alvin (1945-1949)	10-11	13-10	12-11	10-9
LOVE, Elmer H. (1913-1920)	2-0	6-5	13-12	5-4
LUNDGREN, Carl Leonard (1902-1909)	11-9	17-9	13-5	17-6
LUSH, John C. (1904-1910)	18-15	4-9	11-18	11-18
MARBERRY, Frederick (1923-1936)	11-12	8-6	11-7	10 -7
MARCHILDON, Philip J. (1940-1949)	10-15	17-14	13-16	19-9
MARCUM, John A. (1933-1939)	14-11	17-12	8-13	13-11
MAYER, James Erskine (1912-1919)	9-9	21-19	21-15	7-7

McCONNELL, George N. (Lefty) (1909-1916)	8-12	5-15	25-10	4-12
MCGEE, Wm. Henry (Fiddler) (1935-1942)	7-12	12-5	16-10	2-9
McKAIN, Archibald R. (Happy) (1937-1943)	8-8	5-4	5-6	5-0
McWEENEY, Douglas L. (Buzz) (1921-1930)	3-6	11-13	4-8	14-14
MEINE, Henry W. (Heinie) (1922-1934)	7-6	6-8	19-13	12-9
MELTON, Reuben Franklin (1941-1947)	1-5	9-20	5-8	9-13
MILLER, Walter J. (1924-1933)	10-13	10-8	8-9	14-12
MILNAR, Albert J. (Happy) (1936-1946)	3-1	14-12	18-10	12-19
MITCHELL, Frederick Francis (1901-1913)	6-9	5-7	11-14	4-7
MOORE, William A. (Cy) (1929-1934)	3-3	1-2	0-3	8-9
MOORE, William W. (Cy) (1927-1933)	19-7	4-4	11-13	6-4
MOREN, Lewis Howard (1903-1910)	11-18	8-9	16-15	13-14
MORGAN, Harry R. (Cy) (1903-1913)	13-14	15-8	18-12	15-8
MULCAHY, Hugh Noyes (1935-1947)	8-18	10-20	9-16	13-22
MUNGER, George D. (Red) (1943-1949)	9-5	11-3	16-5	10-11
MYERS, Elmer Glen (1915-1922)	14-24	9-16	8-7	8-12
NAYLOR, Roleine Cecil (1917-1924)	5-18	10-23	3-13	10-15

NELSON, Lynn B.(Line Drive) (1930-1940)	3-2	5-5	4-9	10-11
NEWTON, Eustace J. (Doc) (1900-1909)	10-15	5-12	15-13	6-5
NIGGELING, John Arnold (1938-1946)	7-11	7-9	15-11	6-8
NORTH, Louis Alexander (1913-1924)	3-2	4-4	10-3	3-4
OGDEN, John Mahlon (1918-1932)	15-16	4-8	4-8	2-2
OSBORN, Frank Robert (1925-1931)	6-5	5-5	10-6	6-1
OSBORNE, Ernest P. (Tiny) (1922-1925)	9-5	8-15	6-5	8-15
OVERALL, Orval (1905-1913)	18-23	16-7	23-8	15-11
OVERMIRE, Frank (Stubby) (1943-1949)	7-6	11-11	9-9	5-7
OWEN, Frank Malcolm (1901-1909)	8-11	21-15	22-14-	22-13
PARMELEE, LeRoy E.(Tarzan) (1929-1939)	13-8	10-6	14-10	11-11
PAGE, Joseph F. (Fireman) (1944-1949)	6-3	9-8	14-8	7-8
PAPISH, Frank Richard (1945-1949)	7-5	12-12	2-8	1-0
PATTERSON, Roy C. (1901-1907)	20-16	20-12	14-16	9-9
PEARSON, Isaac Overton (1939-1948)	2-13	3-14	4-14	1-6
PEARSON, Marcellus M.(Monte) (1932-1941)	18-13	8-13	19-7	9-3
PERDUE, Hubbard E. (1911-1915)	6-10	13-16	16-13	8-8

PERRITT, Wm. D. (Poll) (1912-1921)	6-14	16-13	12-18	18-11
PETTY, Jesse Lee (1921-1930)	9-9	17-17	13-18	15-15
PFIESTER, John T. J. (1903-1911)	20-8	14-9	12-10	17-6
PIERETTI, Marino P. (1945-1949)	14-13	2-2	2-4	8-10
PITTINGER, Chas. R. (1900-1907)	14-17	27-14	18-22	15-22
PRUETT, Hubert S. (1922-1932)	7-7	4-7	3-4	7-17
PRENDERGAST, Michael T. (1914-1919)	5-9	14-12	6-11	3-6
PRESSNELL, Forest C. (1938-1942)	11-14	9-7	6-5	5-3
REINHART, Arthur Conrad (1919-1928)	11-5	10-5	5-2	4-6
RHOADES, Robert B. (1902-1909)	10-9	16-9	22-10	15-14
RHODES, John G. (1929-1936)	12-15	12-12	2-10	9-20
RIDDLE, Elmer Ray (1939-1949)	19-4	7-11	21-11	12-10
RIGNEY, John Dungan (1937-1947)	2-5	9-9	15-8	15-18
ROBERTSON, Charles C. (1919-1928)	14-15	13-18	8-12	7-17
ROBINSON, John H. (1911-1918)	12-7	14-9	7-8	7-8

RUSSELL, Ewell A. (1913-1923)	22-16	8-12	11-12	18-11
RUSSO, Marius Ugo (1939-1946)	8-3	14-8	14-10	5-10
RYBA, Dominic J. (1935-1946)	9-6	7-3	3-3	7-5
RYAN, Wilfred P. D. -(1919-1933)-	7-10	17-12	16-5	8-6
SALVO, Manuel (1939-1943)	4-10	10-9	7-16	7-8
SCANLAN, William D. (1903-1911)	14-12	18-13	9-11	3-10
SCHANZ, Charley M. (1944-1947)	13-16	4-15	6-6	2-4
SCHNEIDER, Peter Joseph (1914-1919)	5-13	14-19	10-19	20-19
SCHOTT, Eugene Arthur (1935-1939)	8-11	11-11	4-13	5-5
SCHULZ, Albert (1912-1916)	8-14	7-12	21-14	8-19
SCHUPP, Ferdinand Maurice (1913-1922)	1-0	9-3	21-7	16-13
SEATON, Thomas Gordon (1912-1917)	16-12	27-12	25-14	7-7
SEIBOLD, Harry (1915-1933)	4-16	12-17	15-16	10-18
SHOFFNER, Milburn J. (1929-1940)	3-4	8-7	4-6	1-0

SHORE, Ernest G. (Long) (1912-1920)	19-7	16-10	13-10	5-8
SIEVER, Edward T. (1901-1908)	18-11	8-13	14-15	9-14
SMITH, George A. (1916-1923)	5-11	13-18	4-20	5-14
SMITH, George Selby (1926-1930)	1-2	4-1	1-1	1-2
STONER, Ulysses (1922-1931)	11-11	10-9	7-10	10-13
STOUT, Allyn M. (1931-1943)	6-0	4-5	2-3	6-8
STRINCEVICH, Nicholas M. (1940-1948)	4-8	14-7	16-10	10-15
SUDHOFF, John W. (1887-1906)	6-8	17-11	13-11	21-16
SUGGS, George Franklin (1908-1915)	20-12	15-13	19-16	8-15
SULLIVAN, Joseph (1935-1941)	6-6	2-5	6-9	10-14
SUMMERS, Oren E. (1908-1912)	24-12	19-9	13-12	11-11
SUNDRA, Stephen R. (1936-1946)	6-4	11-1	4-6	9-13
SWEETLAND, Lester L. (1927-1931)	2-10	3-15	13-11	7-15
SWETONIC, Stephen A. (1929-1935)	8-10	6-6	11-6	12-12
TAMULIS, Vitautas C. (1934-1941)	10-5	12-6	9-8	8-5
TAYLOR, John W. (1900-1907)	10-17	13-20	22-10	21-14

TESREAU, Charles M. (1912-1918)	17-7	22-13	26-10	19-16
THOMAS, Luther B. (1932-1941)	8-15	9-14	7-0	1-3
THOMPSON, Eugene E. (1939-1949)	13-5	16-9	6-6	4-7
TOWNSEND, John (1901-1906)	8-16	2-11	5-26	7-16
TROTTER, William Felix (1937-1944)	2-9	6-13	7-6	4-2
VAN ATTA, Russell (1933-1939)	12-4	3-5	9-16	4-7
VOISELLE, William S. (1949-1949)	21-16	14-14	9-15	8-7
WADE, Jacob F. (1936-1946)	7-10	3-2	1-4	3-7
WARHOP, John M. (1908-1915)	13-15	14-14	12-13	10-19
WATSON, John R. (1918-1924)	6-11	14-13	8-14	7-4
WEAVER, James D. (1928-1939)	11-9	14-8	14-8	8-5
WEAVER, Montgomery M. (1931-1939)	22-10	10-5	11-15	6-4
WEILAND, Robert G. (1928-1940)	6-16	8-14	15-14	16-11
WEILMAN, Carl W. (1912-1920)	10-20	19-13	18-18	18-18
WEIMER, Jacob W. (1903-1909)	20-8	20-14	18-12	20-14
WELCH, John Vernon (1926-1936)	4-6	4-9	13-15	10-9

WHITEHEAD, John H. (1935-1942)	13-13	13-13	11-8	10-11
WICKER, Robert K. (1901-1906)	6-13	20-9	17-9	13-6
WILLIAMS, Claude P. (1913-1920)	13-7	17-8	23-11	22-14
WILLOUGHBY, Claude Wm. (1925-1931)	8-12	3-7	6-5	15-14
WINGARD, Ernest J. (1924-1927)	13-12	9-10	5-8	2-13
WOLFF, Roger Francis (1941-1947)	12-15	10-15	4-15	20-10
WYSE, Henry Washington (1942-1947)	9-7	16-15	22-10	14-12
YDE, Emil Ogden (1924-1929)	16-3	17-9	8-7	1-3
YOUNG, Irving M. (1905-1911)	20-22	16-25	10-23	4-8
ZAHNISER, Paul Vernon (1923-1929)	9-10	5-7	5-12	6-18
ZOLDAK, Samuel Walter (1944-1949)	3-2	9-11	9-10	9-6
ZUBER, William H. (1936-1947)	6-4	9-9	8-4	5-7

SEVEN TO NINE YEAR GROUP

ALDRIDGE, Victor E. (1917-1928)	6-6 15-7	16-15 10-13	16-9 15-10	15-12
APPLETON, Peter W. (1927-1945)	3-4 8-15	8-7 7-9	4-4 5-10	14-9
AUKER, Eldon LeRoy (1933-1942)	15-7 11-10	18-7 9-10	13-16 16-11	17-9
AYERS, Yancey W. (1913-1921)	12-16 10-13	15-9 4-3	5-8 7-14	11-10
BAGBY, James C., Jr. (1938-1947)	15-11 17-9	5-5 17-14	10-16 8-11	9-15
BAGBY, James C., Sr. (1912-1923)	16-17 31-12	25-13 14-12	17-16 4-5	17-11
BARRETT, Charles H. (1937-1949)	12-18 11-12	9-16 7-8	21-9 1-1	3-2
BECK, Walter (1924-1945)	12-20 1-9	2-6 0-1	7-14 1-2	4-9
BELL, Herman S. (1924-1934)	3-8 8-4	6-6 6-5	1-3 4-3	4-3
BENGE, Raymond A. (1925-1938)	8-18 13-12	11-15 10-17	11-15 14-12	14-18
BERNHARD, William H. (1900-1907)	15-10 23-13	17-11 7-13	17-5 16-15	14-5
BETTS, Walter M. (1920-1935)	1-1 4-5	3-7 13-11	2-4 11-11	7-10
BLAEHOLDER, George F. (1925-1936)	10-15 14-14	14-15 15-19	11-13 14-18	11-15
BLAKE, John F. (1920-1937)	6-6 17-11	10-18 14-13	11-12 10-14	13-14
BLANKENSHIP, Theodore (1922-1930)	8-10 13-10	9-14 12-17	7-6 9-11	17-8

BONHAM, Ernest E. (1940-1949)	9-6 8-11	21-5 11-8	15-8 6-10	12-9
BOROWY, Henry Ludwig (1942-1949)	15-4 8-12	14-9 5-10	17-12 12-12	12-10
BOWMAN, Joseph Emil (1932-1945)	5-4 10-14	7-10 9-10	9-20 3-2	8-8
BRECHEN, Harry D. (1940-1949)	9-6 16-11	16-5 20-7	15-4 14-11	15-15
BROWN, Stanley Mace (1935-1946)	10-11 10-9	7-2 3-2	15-9 9-3	9-13
BROWN, Walter G. (1925-1941)	7-5 4-0	6-5 2-4	1-4 1-5	5-3
BURKE, Robert Joseph (1927--1937)	3-2 8-3	2-4 3-6	6-8 4-3	3-4
BUTCHER, Albert M. (1936-1945)	6-6 17-12	11-15 5-8	5-4 10-8	8-9
CAMNITZ, Samuel H. (1904-1915)	13-8 20-15	16-9 22-12	25-6 6-17	12-13
CANTWELL, Benjamin C. (1927-1937)	3-3 13-11	4-13 20-10	9-15 5-11	7-9
CARLETON, James O. (1932-1940)	10-13 14-10	17-11 16-8	16-11 10-9	11-8
CARRASQUEL, Alejandro A. (1939-1949)	5-9 6-2	6-2 8-7	7-7 7-5	11-7
CARROLL, Owen T. (1925-1934)	10-6 10-19	16-12 13-15	9-17 1-3	3-9
CASEY, Hugh Thomas (1935-1949)	15-10 11-5	11-8 10-4	14-11 3-0	6-3
CHENEY, Lawrence Russell (1911-1919)	26-10 18-12	21-14 8-12	20-18 11-13	8-9

CHRISTOPHER, Russell O. (1942-1948)	4-13 5-7	5-8 10-7	14-14 3-2	13-13
CLARK, William W. (1924-1937)	7-2 14-10	12-9 20-12	16-19 13-8	13-13
COLLINS, Harry W. (1920-1931)	14-8 6-11	11-5 8-8	14-11 13-7	14-7
COLLINS, Philip E. (1923-1935)	9-7 8-13	16-11 13-18	12-16 7-6	14-12
CONNALLY, George W. (1921-1934)	7-13 2-5	6-7 8-6	6-5 5-3	10-15
COOPER, Morton C. (1938-1949)	12-6 21-8	11-12 22-7	13-9 7-4	22-7
CRANDALL, Otis J. (1908-1918)	12-12 13-7	6-4 4-4	17-4 12-8	15-5
CROWDER, Alvin F. (1926-1936)	3-5 18-11	2-5 26-13	17-15 24-15	15-9
DANFORTH, David Charles (1911-1925)	6-5 16-14	11-6 15-12	6-15 7-9	5-2
DEAN, Alfred L. (1936-1943)	1-0 8-11	5-8 5-5	6-13 1-4	2-4
DEMAREE, Albert W. (1912-1919)	13-4 5-9	10-17 8-6	14-11 6-6	19-14
DIETRICH, William J. (1933-1948)	11-12 7-8	7-13 10-6	4-6 6-11	8-10
DONOHUE, Peter Joseph (1921-1932)	7-6 21-14	18-9 20-14	21-15 6-16	16-9
DOUGLAS, Philip B. (1912-1922)	11-18 10-6	5-5 14-10	14-20 15-10	10-9
EARNSHAW, George L. (1928-1936)	7-7 19-13	24-8 5-10	22-13 14-11	21-7
EWING, George L. (1902-1912)	14-13 17-19	11-13 17-15	20-11 11-12	13-14
FISHER, Raymond L. (1910-1920)	10-11 11-8	11-17 8-9	10-12 14-5	18-11

FREY, Benjamin R. (1929-1936)	11-18 11-16	8-12 6-10	4-10 10-8	6-4
FROMME, Arthur L. (1906-1915)	4-13 16-18	5-13 0-0	19-13 9-5	10-11
GENEWICH, Joseph Ed. (1922-1930)	13-14 11-8	10-19 11-4	12-10 3-7	8-16
GROOM, Robert (1909-1918)	6-26 15-16	12-17 13-20	13-18 11-11	24-13
HAEFNER, Milton Arnold (1943-1949)	11-5 10-14	12-15 5-13	16-14 5-5	14-11
HAMLIN, Luke Daniel (1933-1944)	2-3 9-8	11-13 8-8	12-15 4-4	20-13
HARMON, ROBERT Green (1909-1918)	6-11 8-21	13-15 13-17	23-16 16-17	18-18
HARRISS, William Bryan (1920-1928)	9-14 6-10	11-16 19-12	9-20 6-10	10-16
HAYNES, Joseph Walton (1939-1949)	8-12 5-6	3-6 7-9	8-5 14-6	7-2
HEIMACH, Fred Amos (1920-1933)	7-11 11-6	6-12 9-7	14-12 9-4	2-9
HEINTZELMAN, Kenneth A. (1937-1949)	8-8 7-10	11-11 6-11	8-11 17-10	8-12
HENSHAW, Roy John (1933-1944)	2-1 5-11	13-5 2-4	6-5 0-2	5-12
HEUSSER, Edward Burlton (1935-1948)	5-5 13-11	7-3 11-16	6-13 7-14	4-3
HIGBE, Walter Kirby (1937-1949)	10-14 13-10	14-19 17-8	22-9 11-17	16-11
HILDEBRAND, Oral Clyde (1931-1940)	8-6 10-11	16-11 8-17	11-9 8-10	9-8
HOGSETT, Elon Chester (1929-1944)	9-8 3-2	3-9 6-6	11-9 13-15	6-10
HOLLINGSWORTH, Albert W. (1935-1946)	6-13 10-6	9-10 6-13	9-15 5-7	5-16

HOLLOWAY, Kenneth E. (1922-1930)	11-10 11-12	14-6 4-8	13-4 6-5	4-5
JABLONOWSKI, Peter W. (1927-1945)	3-4 8-15	8-7 7-9	4-4 5-10	14-9
JOHNSON, Henry Ward (1925-1939)	1-3 8-6	14-9 6-8	14-11 0-3	13-8
JONES, Percy Lee (1920-1930)	3-5 7-8	8-9 10-6	6-6 7-15	12-7
JOSS, Adrian (1902-1910)	16-13 21-9	18-13 27-11	14-10 24-11	20-11
KENNEDY, Lloyd (Vern) (1934-1945)	11-11 9-17	21-9 12-17	14-13 4-8	12-9
KLINGER, Robert Harold (1938-1947)	12-5 8-11	14-17 11-8	8-13 3-2	9-4
KRAMER, John Henry (1939-1949)	9-16 13-11	4-3 11-16	17-13 18-5	10-15
KREMER, Remy (Ray) (1924-1933)	18-10 15-13	17-8 18-10	20-6 20-12	19-8
LANNING, John Young (1936-1947)	7-11 8-4	5-7 11-11	8-7 6-8	5-6
LEONARD, Hubert B. (1913-1925)	14-16 17-17	19-5 14-13	15-7 10-17	18-12
MAHAFFEY, Lee Roy (1926-1936)	9-5 6-7	15-4 8-4	13-13 2-6	13-10
McINTIRE, Harry M. (1905-1913)	8-25 7-17	13-21 13-9	7-15 11-7	11-20
McQUILLAN, George Wash- (1907-1918) ington	23-17 13-17	13-16 8-10	9-6 1-7	8-6
MELTON, Clifford George (1937-1944)	20-9 8-11	14-14 11-5	12-15 9-13	10-11
MITCHELL, Willis A. (1909-1919)	12-8 12-17	8-14 11-14	5-8 8-1	14-8
MORRISON, John Dewey (1920-1930)	9-7 17-14	17-11 6-8	25-13 3-2	11-16

MUNCRIEF, Robert C. (1937-1949)	13-9 13-4	6-8 3-12	13-12 8-14	13-8
OESCHGER, Joseph (1914-1925)	4-8 20-14	15-14 6-21	6-18 5-15	15-13
PATTEN, Case L. (1901-1909)	18-10 14-23	18-17 19-16	10-23 12-17	14-24
PELTY, Barney (1903-1912)	15-17 10-11	14-14 11-11	17-12 5-10	12-21
PFEFFER, Edward Joseph (1911-1924)	23-12 17-13	19-14 16-9	25-11 19-12	11-15
PIPGRAS, George William (1923-1935)	10-3 7-6	24-13 16-9	18-12 9-8	15-15
POTTER, Nelson Thomas (1936-1949)	2-12 19-7	8-12 15-11	9-14 8-9	10-5
RAGAN, Don Carlos P. (1909-1923)	4-3 16-12	7-18 9-9	15-18 6-9	10-15
RHEM, Charles Flint (1924-1936)	8-13 12-8	20-7 11-10	10-12 11-7	11-8
RICHIE, Lewis A. (1906-1913)	9-11 11-4	6-6 15-11	7-10 16-8	7-7
ROSS, Lee Raven (1936-1945)	9-14 5-10	5-10 3-8	9-16 5-7	6-14
RUCKER, George Napoleon (1907-1916)	15-13 22-18	17-19 18-21	13-19 14-15	17-18
RUDOLPH, Richard (1910-1927)	14-13 13-13	27-10 9-10	22-19 13-18	19-12
SCOTT, James (1909-1917)	12-12 14-18	8-17 24-11	14-11 7-14	20-20
SCOTT, John William (1916-1929)	6-6 14-15	10-21 13-15	15-13 9-21	16-7
SHAW, James Aloysius (1913-1921)	15-17 16-12	5-12 16-17	3-5 11-18	15-14
SMITH, Charles E. (1902-1914)	9-16 11-6	11-21 7-4	9-13 7-9	2-11

SMITH, Edgar (1936-1947)	4-17 13-17	3-10 7-20	9-11 11-11	14-9
SMITH, Frank Elmer (1904-1915)	16-9 16-17	19-12 25-17	5-5 4-10	22-11
SORRELL, Victor Garland (1928-1937)	8-11 14-14	14-15 11-15	16-11 6-9	13-14
SOTHORON, Allen Sutton (1914-1926)	15-20 12-5	12-12 10-16	20-12 10-10	8-15
STEWART, Walter Cleveland (1921-1935)	8-11 14-17	7-9 15-19	9-6 15-6	20-12
SWIFT, William (1932-1943)	14-10 16-16	14-10 9-10	11-13 7-5	15-8
TAYLOR, Luther Haden (1900-1908)	18-27 16-9	8-14 17-9	13-13 11-7	21-15
Thomas, Alphonse (Tommy) (1926-1937)	15-12 5-13	19-16 10-14	17-16 7-7	14-18
THURSTON, Hollis John (1923-1933)	7-8 13-13	20-14 6-4	10-14 9-9	6-8
TOBIN, James Anthony (1937-1945)	14-12 12-21	9-9 14-14	7-3 18-19	12-12
TONEY, Frederick A. (1911-1923)	17-6 13-6	14-17 21-11	24-16 18-11	6-10
TURNER, James Riley (1937-1945)	20-11 6-4	14-18 4-4	4-11 3-4	14-7
TYLER, George Albert (1910-1921)	7-10 10-9	12-22 17-10	16-17 14-12	16-14
VANGILDER, Elam Russell (1919-1929)	3-8 5-10	11-12 14-8	19-13 9-11	16-17
VAUGHN, James Leslie (1908-1921)	13-11 17-15	8-10 23-13	21-13 22-10	20-12
WALKER, William Henry (1927-1936)	3-6 8-12	14-7 9-10	17-15 12-4	16-9
WALSH, Edward Arthur Sr. (1904-1917)	8-5 15-11	17-13 18-20	24-18 27-18	40-15

WELLS, Edwin Lee (1923-1934)	6-8 12-3	6-9 9-5	12-10 3-3	13-9
WILLETT, Robert Edgar (1906-1915)	15-9 17-15	22-9 13-14	16-11 4-16	13-14
WILSON, John Francis (1934-1942)	3-4 11-11	6-8 12-6	16-10 4-13	15-15
WINTER, George L. (1901-1908)	17-10 16-16	11-9 6-18	10-8 11-16	8-4
WOOD, Joseph (1908-1922)	11-7 11-5	12-13 9-3	23-17 14-5	34-5

TEN TO TWELVE YEAR GROUP

ALLEN, John T. (1932-1944)	17-4 15-1	15-7 14-8	5-2 9-7	13-6 9-8	20-10 2-5
BARNES, Jesse L. (1915-1927)	6-14 13-8	13-21 10-14	25-9 15-20	20-15 11-16	15-9 10-11
BENTON, John A. (1934-1949)	7-9 7-13	3-4 13-8	6-8 11-7	6-10 6-7	15-6 2-2
BENTON, John C. (1910-1925)	18-20 15-9	11-7 17-11	16-18 9-16	6-13 14-10	16-8 7-9
BENTON, Lawrence J. (1923-1935)	5-9 25-9	5-7 11-17	14-7 7-12	14-14 10-15	13-5 6-13
BRANDT, Edward A. (1928-1938)	9-21 18-14	8-13 16-14	4-11 5-19	18-11 11-13	16-16 11-10
BROWN, Clinton H. (1928-1942)	11-13 6-2	11-15 7-7	15-12 11-10	11-12 4-6	5-3 3-3
BROWN, Lloyd A. (1925-1940)	4-4 8-11	8-7 5-10	16-12 8-7	15-14 8-10	15-12 2-6
BROWN, Mordecai Peter C. (1903-1916)	9-13 27-9	15-10 25-14	18-12 21-11	26-6 20-6	29-9 11-12
BUSH, Guy T. (1923-1945)	6-13 15-10	13-9 16-8	10-10 19-11	15-6 20-12	18-7 18-10
CALDWELL, Raymond B. (1910-1921)	14-14 5-12	8-16 12-16	9-8 10-8	17-9 5-4	19-16 20-10
CARLSON, Harold G. (1917-1930)	7-11 8-17	8-10 13-14	14-13 17-12	4-8 12-8	9-12 3-2
CASTER, George J. (1934-1946)	1-4 3-7	12-19 8-2	16-20 6-8	9-9 6-6	4-19 5-1
COOMBS, John W. (1906-1920)	10-11 21-10	6-9 15-10	12-11 7-5	31-9 13-8	28-13 7-11
COVELESKI, Stanley (1912-1928)	16-14 23-12	19-13 17-14	22-13 13-14	24-12 15-16	24-14 20-5
DAVIS, Curtis B. (1934-1946)	19-17 22-16	16-14 8-7	11-9 13-7	10-5 15-6	12-8 10-13

EHMKE, Howard J. (1915-1930)	10-15 20-17	17-10 19-17	15-18 9-20	13-14 12-4	17-17 12-10
FERRELL, Wesley C. (1927-1941)	21-10 14-5	25-13 25-14	22-10 20-15	23-13 11-13	11-12 13-8
FRANKHOUSE, Fred M. (1927-1939)	3-2 16-15	7-2 17-9	7-6 11-15	8-8 13-10	4-6 10-13
GALEHOUSE, Dennis W. (1934-1949)	8-7 9-10	9-14 12-12	7-8 11-11	9-10 9-10	6-6 8-12
GASTON, Milton N. (1924-1934)	5-3 12-19	15-14 13-20	10-18 2-13	13-17 7-17	6-12 8-12
GOMEZ, Vernon L. (1930-1943)	21-9 13-7	24-7 21-11	16-10 18-12	26-5 12-8	12-15 15-5
GRAY, Samuel D. (1924-1933)	8-7 18-15	16-8 4-15	11-12 11-24	9-6 7-12	20-12 7-4
HALLAHAN, William A. (1925-1938)	4-4 8-12	15-9 15-8	19-9 5-9	12-7 3-9	16-13 1-8
HAMILTON, Earl A. (1911-1924)	5-12 7-6	10-14 0-9	13-12 8-11	16-18 10-13	9-17 13-15
HENDRIX, Claude R. (1911-1920)	4-6 8-16	24-9 10-12	14-15 20-7	29-10 10-14	16-15 9-12
HEVING, Joseph W. (1930-1945)	7-5 11-3	1-6 12-7	7-5 5-2	1-7 5-3	8-4 1-1
HUGHES, Thomas J. (1900-1913)	10-22 7-13	21-7 18-15	5-12 4-8	17-20 12-18	7-17 13-10
KNOTT, John H. (1933-1946)	1-8 5-10	10-3 11-6	11-8 11-9	9-17 13-11	8-18 2-10
KOLP, Raymond C. (1921-1934)	8-7 13-10	14-4 8-10	5-12 7-12	5-7 4-9	3-3 6-10
LEE, Thornton S. (1933-1948)	1-1 15-11	7-10 12-13	3-5 22-11	12-10 15-12	13-12 3-7
LEE, William C. (1934-1947)	13-14 19-15	20-6 9-17	18-11 8-14	14-15 13-13	22-9 10-11
MALONE, Perce L. (1928-1937)	18-13 10-14	22-10 14-7	20-9 3-5	16-9 12-4	15-17 4-4

MARBERRY, Frederick (1923-1936)	11-12 19-12	8-6 15-5	11-7 16-4	10-7 8-4	13-13 16-11
MAY, Frank S. (1917-1932)	5-6 15-12	5-12 3-5	3-3 10-14	8-9 3-11	15-9 5-5
MAYS, Carl W. (1915-1929)	4-6 26-11	18-13 27-9	22-9 13-14	21-13 5-2	8-12 20-9
MOGRIDGE, George A. (1911-1927)	6-12 18-14	9-12 18-13	16-13 13-13	10-8 16-11	5-9 4-3
MOORE, Earl L. (1901-1914)	16-14 18-12	16-19 22-15	22-7 15-19	12-11 9-14	15-14 11-15
MORTON, Guy (1914-1924)	1-13 9-9	15-15 8-6	13-6 8-3	10-10 14-9	14-8 6-7
MULLIN, George E. (1902-1915)	14-15 20-21	19-14 17-12	17-23 29-9	22-18 21-12	21-18 18-10
MUNGO, Van L. (1931-1945)	13-11 9-11	16-15 4-11	18-16 4-5	16-10 3-7	18-19 14-7
MURPHY, John Joseph (1932-1947)	14-10 3-6	10-5 8-4	9-3 8-3	13-4 4-10	8-2 12-4
NEWHOUSE, Harold (1939-1949)	9-9 25-9	9-11 26-9	8-14 17-17	8-17 21-12	29-9 18-11
OSTERMUELLER, Frederick (1934-1948)	10-13 11-7	7-8 5-9	10-16 11-7	3-7 13-10	13-5 12-10
PASSEAU, Claude W. (1935-1947)	11-15 14-14	14-18 19-14	11-18 15-12	13-9 15-9	20-13 17-9
REULBACH, Edward M. (1905-1917)	18-14 12-8	19-4 16-9	17-4 10-6	24-7 11-18	19-10 21-10
RING, James J. (1917-1928)	3-7 12-18	9-5 18-16	10-9 10-12	17-16 14-16	10-19 11-10
ROMMEL, Edwin A. (1920-1932)	7-7 21-10	16-23 11-11	27-13 11-3	18-19 13-5	18-15 12-2
ROWE, Lynwood T. (1933-1949)	7-4 16-3	24-8 8-6	19-13 14-8	19-10 11-4	10-12 14-10
RUETHER, Walter H. (1917-1927)	2-0 15-14	19-6 8-13	16-12 18-7	10-13 13-6	21-12 13-6

RUSSELL, Allan E. (1915-1925)	6-10 5-6	7-8 7-11	8-11 6-7	9-4 10-7	8-5 5-1
SALLEE, Harry F. (1908-1921)	3-9 18-17	10-11 13-17	15-9 18-7	16-17 21-7	19-15 5-6
SCHUMACHER, Harold H. (1931-1946)	5-6 13-12	19-12 13-8	23-10 13-10	19-9 13-13	11-13 12-10
SEWELL, Truett B. (1932-1949)	10-9 21-12	16-5 11-9	14-17 8-12	17-15 6-4	21-9 13-3
SHAUTE, Joseph B. (1922-1934)	10-8 13-17	20-17 8-8	4-12 11-8	14-10 7-7	9-16 3-4
SHAWKEY, James R. (1913-1927)	16-8 18-12	24-14 20-12	13-15 16-11	20-11 16-11	20-13 6-14
SHOCKER, Urban J. (1916-1928)	8-4 20-12	13-11 16-13	20-10 12-12	27-12 19-11	24-17 18-6
SHOUN, Clyde Mitchell (1935-1949)	7-7 1-3	6-6 14-5	3-1 13-10	13-11 1-6	3-5 5-3
SMITH, Alfred J. (1934-1945)	3-5 15-7	10-8 12-13	14-13 10-15	5-4 17-7	1-4 7-13
SMITH, Robert E. (1923-1937)	5-3 10-14	10-13 15-12	10-18 4-3	13-17 6-9	11-17 8-18
SMITH, Sherrod M. (1911-1927)	14-8 7-11	14-10 4-8	12-12 9-6	7-12 12-14	11-9 11-14
TROUT, Paul (Dizzy) (1939-1949)	9-10 27-14	3-7 18-15	9-9 17-13	12-18 10-11	20-12 10-14
VANDER MEER, John S. (1937-1949)	3-5 15-16	15-10 10-12	5-9 9-14	16-13 17-10	18-12 5-10
WARNEKE, Lonnie (1930-1945)	2-4 16-13	22-6 18-11	18-13 13-8	22-10 13-7	20-13 16-10
WHITE, Guy H. (1901-1913)	15-13 18-6	15-20 27-13	17-16 19-13	16-12 10-9	18-14 15-13
WILTSE, George L. (1904-1915)	13-3 20-11	15-6 14-12	16-11 12-9	13-12 9-6	23-14 11-6
WYATT, John W. (1929-1945)	4-5 2-3	9-13 15-14	9-0 22-10	4-11 19-7	4-3 14-5

THIRTEEN TO FIFTEEN YEAR GROUP

ADAMS, Charles B. (1906-1926)	12-3 13-16 8-11	18-9 14-14 13-7	22-12 17-10 6-5	11-8 17-13	21-10 14-5
AMES, Leon K. (1903-1919)	22-8 11-10 15-10	12-10 11-5 9-14	10-12 11-13 3-5	15-10 15-23	12-11 11-16
BENDER, Charles A. (1903-1925)	17-15 8-9 19-9	10-11 18-8 17-3	15-10 23-5 4-16	15-10 17-5	16-8 15-9
BRIDGES, Thomas J. (1930-1946)	8-16 23-11 9-12	14-12 15-12 9-7	14-12 13-9 12-7	22-11 17-7	21-10 12-9
BUSH, Leslie A. (1912-1928)	13-7 15-15 17-16	16-12 15-15 14-14	5-15 16-9 6-6	15-24 26-7	11-17 19-15
CICOTTE, Edward V. (1905-1920)	11-12 18-12 12-19	13-5 11-16 29-7	15-11 13-11 21-10	11-14 15-7	9-10 28-13
COFFMAN, Samuel R. (1927-1945)	4-5 3-7 8-4	1-1 9-10 1-2	8-18 5-11 1-5	9-13 7-5	1-6 8-3
COOPER, Arlie W. (1912-1926)	5-3 19-14 17-19	16-15 19-13 20-14	5-16 24-15 12-14	12-11 22-14	17-11 23-14
DAUSS, George A. (1912-1926)	13-12 12-16 21-13	18-15 21-9 12-11	23-13 13-21 16-11	18-12 10-15	17-14 13-13
DERRINGER, Paul (1931-1945)	18-8 19-19 12-14	11-14 10-14 10-11	7-25 21-14 10-14	15-21 25-7	22-13 20-12
DOAK, William L. (1912-1929)	19-6 13-14 11-5	16-18 20-12 11-8	12-8 15-6 3-8	16-20 11-13	9-15 8-13
FITZSIMMONS, (Fat) (1925-1943)	14-10 18-11 11-8	17-10 11-11 7-9	20-9 16-11 16-2	15-11 18-14	19-7 10-7

FRENCH, Lawrence H. (1929-1942)	7-5 12-18 15-8	17-18 17-10 14-14	15-13 18-9 5-14	18-16 16-10	18-13 10-19
GUMBERT, Harry E. (1935-1949)	11-3 11-5	10-11 9-5	15-13 10-5	18-11 10-8	12-14 6-8
HADLEY, Irving D. (1926-1941)	14-6 13-20	12-13 15-20	6-16 10-16	15-11 10-15	11-10 14-4
HARDER, Melvin L. (1928-1947)	0-2 20-12 15-9	11-10 22-11 12-11	13-14 15-15 13-14	15-13 15-12	15-17 17-10
HUBBELL, Carl O. (1928-1943)	10-6 23-12 13-10	18-11 21-12 11-9	17-12 23-12 11-12	14-12 26-6	18-11 22-8
HUDLIN, George W. (1926-1944)	18-12 12-8 12-11	14-14 5-13 8-8	17-15 15-10 9-10	13-16 15-11	15-14 1-5
JOHNSON, Silas K. (1928-1947)	3-1 5-11 8-3	11-19 12-12 6-5	13-15 5-14 6-8	7-18 5-12	7-22 8-19
JOHNSON, Sylvester W. (1922-1940)	7-3 12-10 10-8	12-7 11-9 5-7	5-4 5-14 4-10	8-4 3-3	13-7 5-9
LEONARD, Emil J. (1933-1949)	14-11 18-13 17-12	2-9 11-13 12-17	12-15 14-14 7-16	20-8 17-7	14-19 10-10
LUCAS, Charles F. (1923-1938)	1-4 14-16 8-6	8-5 14-13 15-4	18-11 13-7 8-10	13-9 10-16	19-12 10-9
LUQUE, Adolfo (1914-1935)	13-9 16-18 14-8	17-19 13-16 6-7	13-23 13-12 8-2	27-8 11-10	10-15 5-16
MacFAYDEN, Daniel K. (1926-1943)	5-8 3-2 14-9	9-15 4-3 8-14	10-18 5-13 5-4	11-14 17-13	16-12 14-14
MARQUARD, Richard (1908-1925)	5-13 9-8 17-14	24-7 13-6 11-15	26-11 19-12 11-14	23-10 9-18	12-22 10-7

MATHEWSON, Christopher (1900-1916)	20-16 22-12 26-13	13-18 24-12 23-12	30-13 37-11	33-12 25-6	31-9 27-9
MEADOWS, Henry Lee (1915-1929)	13-11 16-14 4-10	12-23 11-16 19-10	15-9 12-18 20-9	8-14 16-10	8-10 13-12
MITCHELL, Clarence E. (1911-1932)	11-10 0-3 8-11	9-15 9-10 10-3	7-5 6-13 13-11	5-2 10-17	11-9 9-14
NEHF, Arthur N. (1915-1929)	7-5 20-10 3-5	17-8 19-13 13-7	15-15 13-10 8-5	8-9 14-4	21-12 11-9
NEWSOM, Louis N. (1929-1948)	16-20 17-10 13-15	11-12 21-5 8-20	17-15 12-20 11-8	13-10 11-17	20-16 9-4
RUSSELL, Jack E. (1926-1940)	0-5 10-18 0-3	4-9 5-7 2-5	11-14 12-6 6-1	6-18 5-10	9-20 4-9
SHERDEL, William H. (1918-1932)	6-12 15-13 21-10	5-9 8-9 10-15	11-10 15-6 6-5	9-8 16-12	17-13 17-12
UHLE, George E. (1919-1936)	10-5 9-15 15-11	4-5 13-11 12-12	16-13 27-11 11-12	22-16 8-9	26-16 12-17
VANCE, Arthur C. (1915-1935)	18-12 17-15 12-11	18-15 22-10 6-2	28-6 14-13 3-2	22-9 17-15	9-10 11-13
WALBERG, George F. (1923-1937)	4-8 18-11 6-7	8-14 13-12 10-9	12-10 20-12 5-4	16-12 17-10	17-12 9-13
WALTERS, William H. (1931-1948)	9-9 22-10 10-10	11-21 19-15 10-7	14-15 15-14 8-8	11-6 15-15	27-11 23-8
ZACHARY, Jonathan T. (1919-1936)	15-16 12-15 11-5	18-16 14-15 11-15	15-10 4-7 12-11	10-16 6-9	15-9 12-0

SIXTEEN AND OVER YEAR GROUP

ALEXANDER, Grover C. (1911-1930)	28-13	19-17	22-8	27-15
	31-10	33-12	30-18	16-11
	27-14	15-13	16-13	22-12
	12-5	15-11	9-7	21-10
FABER, Urban Charles (1914-1933)	10-9	24-13	17-9	16-13
	11-9	23-13	25-15	21-17
	14-11	9-11	12-11	15-8
	13-9	13-13	8-13	10-14
GRIMES, Burleigh Arland (1916-1934)	3-16	19-9	10-11	23-11
	22-13	17-14	21-18	22-13
	12-19	12-13	19-8	25-14
	17-7	13-6	17-9	6-11
GROVE, Robert Moses (1925-1941)	10-12	13-13	20-13	24-8
	20-6	28-5	31-4	25-10
	24-8	8-8	20-12	17-12
	17-9	14-4	15-4	7-6
HAINES, Jesse Joseph (1918-1937)	13-20	18-12	11-9	20-13
	8-19	13-14	13-4	24-10
	20-8	13-10	13-8	12-3
	3-5	9-6	4-4	6-5
HOYT, Waite Charles (1918-1938)	6-6	19-13	19-12	17-9
	18-13	11-14	16-12	22-7
	23-7	10-9	9-8	5-7
	15-6	7-11	7-5	7-7
JOHNSON, Walter Perry (1907-1927)	14-14	13-25	25-17	23-15
	32-12	36-7	28-18	27-13
	25-21	23-16	23-13	20-14
	8-10	17-14	15-16	17-12
JONES, Samuel Pond (1914-1935)	3-8	16-5	13-20	13-16
	23-16	13-13	21-8	9-6
	15-21	9-8	8-14	17-7
	9-9	15-7	9-10	10-15
LYONS, Theodore Amar (1923-1946)	12-11	21-11	18-16	22-14
	15-14	14-20	22-15	4-6
	10-15	10-21	11-13	15-8
	10-13	12-7	9-11	14-6

PENNOCK, Herbert J. (1912-1934)	11-4	5-5	17-8	16-13
	12-14	10-17	19-6	21-9
	16-17	23-11	19-8	17-6
	9-11	11-7	11-6	9-5
PLANK, Edward Stewart (1901-1917)	16-14	20-15	23-16	26-17
	26-12	19-6	24-16	14-16
	19-10	16-10	22-8	26-6
	17-10	16-6	21-11	15-15
QUINN, John Picus (1909-1933)	9-5	18-12	8-9	26-14
	9-22	15-14	18-10	8-7
	13-16	13-17	12-13	10-11
	15-10	18-7	11-9	9-7
RIXEY, Eppa (1912-1933)	10-10	9-5	2-11	11-12
	22-10	16-21	6-12	11-22
	19-18	25-13	20-15	15-14
	21-11	14-8	12-10	19-18
ROOT, Charles Henry (1923-1941)	0-4	18-17	26-15	14-18
	19-6	16-14	17-14	15-10
	15-10	4-7	15-8	3-6
	13-5	8-7	8-8	2-4
RUFFING, Charles Herbert (1924-1947)	9-18	6-15	5-13	10-25
	9-22	15-5	16-14	18-7
	9-14	19-11	16-11	20-12
	20-7	21-7	21-7	15-12
WHITEHILL, Earl Oliver (1923-1939)	17-9	11-11	16-13	16-14
	11-16	14-15	17-13	13-16
	16-12	22-8	14-11	14-13
	14-11	8-8	9-8	4-7

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