

Player Rating and Computation Section

Now you may use the statistics in this book to rate your favorite players on a current basis during the season in progress. All the details in rating players as to their value to the team is included.

You can compare players of one era of play to another.

You may, if you desire, try out the probability of player performance in a simulated game using Big League Manager Charts.

You might wish to make up your own teams with simulated names and abilities by using the charts that follow.

If you have stats available you can rate the famous All-Stars of the past; the college ball players or even High School, Babe Ruth or Little League players.

The charts and ratings given should allow you to make a better evaluation of the trades that are made and the decisions managers must make in choosing lineups.

I. Pitching Data

A. Explanation of Symbols used in

Makeup and Formulas

G—	Games played
GS—	Games started
IP—	Innings pitched
H—	Hits allowed
AB—	Official At Bats against pitcher— usually BFP minus SH+SF
BFP—	$AB + SH + SF + W + HB$
AB—	$BFP - SH - SF - W - HB$
ER—	Earned runs allowed
HR—	Home runs allowed
SH—	Sacrifice hits
SF—	Sacrifice flies
W—	Walks allowed
IW—	Intentional walks
SO—	Strike outs
HB—	Hit batter
BK—	Balks
WP—	Wild pitches
W#—	added or subtracted from League Ave. W# for final rate
MOB#—	added or subtracted from League Ave. MOB# for final rate.
PHR#—	added or subtracted from League Ave. PHR# for final rate.
SO#—	added or subtracted from League Ave. SO# for final rate.
LA—	League Average for each cate- gory used.

B. Formulas

BB—	$(W - IW + HB) \text{ divide by } (TPA - IW) \times 100$
HB—	$HB \div (W - IW + HB) \times 100$
BA—	H divided by $(AB + SF) \times 100$ — See card layout for further details (next page)
2B—	$2B \div H \times 100$
3B—	$3B \div H \times 100$
HR—	$HR \div H \times 100$
K—	K divided by $(AB + SF - H) \times 100$

following K# GIDP

ability— $GIDP \text{ divided by } (AB + SF - H - SO) \times 857.46 \text{ roundoff}$

$SBA^1 = \frac{SB + CS}{1B + W + HB} + .08 \times (AB + SF - H - K) \times 200$

If answer greater than 95 use 95 for SBA^1 rate.

$SBA^2 = SB \div (SB + CS) \times 100$

II. Batting Data

A. Explanation of Symbols used in

Makeup and Formulas

AB—	At Bats
H—	Hits
R—	Runs
1B—	Total all singles or H minus $(2B + 3B + HR)$
2B—	Doubles
3B—	Triples
HR—	Home Runs
SF—	Sacrifice Fly
SH—	Sacrifice Hits
W-IW—	Walks minus intentional walks
HB—	Hit by pitcher
K—	Strikeouts
SB—	Stolen Bases
CS—	Caught Stealing
GIDP—	Grounded into double play
BB—	Indicates Walk rating ability
HB—	Indicates Hit Batter rating ability
BA—	Indicates Batting for hit ability
2B—	Indicates Double hitting ability
3B—	Indicates Triple hitting ability
HR—	Indicates Home Run hitting ability
K—	Indicates Strikeout rate
SBA^1 —	Indicates attempts to Steal Base
SBA^2 —	Indicates successful Steal ability
RBA—	Indicates Baserunning ability
SAC—	Indicates Sacrifice advance ability

following

K#— GIDP ability

TPA— Total Plate Appearances

$(AB + SH + SF + W + HB)$

Player Rating and Computation Continued...

$$\text{RBA} = \frac{\text{R} - \text{HR} + (3 \times 3\text{B}) + \text{SB} + \text{CS} - \text{GIDP}}{(\text{H} - \text{HR} + \text{W} + \text{HB}) + .06 \times (\text{AB} + \text{SF} - \text{H} - \text{SO})} \times 55$$

plus 25 if numerator is zero or more. If RBA greater than 80 use 80; If RBA lower than 20 use 20.

$$\text{SAC} = [\text{SH} + (\text{AB} + \text{SH} + \text{SF} - \text{H} - \text{SO}) \times 595.6] + 60 \quad \text{If answer less than 40 use 40; If greater than 90 use 90 for answer.}$$

III. Fielding Data

A. Explanation of Symbols used in Makeup and Formulas

GP— Games played
P— Position played
F%— Fielding average
A— Assists
F— Indicates error making possibility
T— Indicates Throwing ability of catchers/outfielders and DP ability of infielders

B. Formulas

T-Rating for Catchers and Outfielders

$$\text{T} = 100 \times (\text{Lea. Ave. } \frac{\text{Assists}}{\text{GP}} \text{ for position}) - \text{Player's } \frac{\text{Assists}}{\text{GP}} + (5.5 - \frac{\text{GP}}{8}).$$

If GP less than 4 use 4; If GP greater than 124 use 124. Roundoff answer.
No rating should be greater than P20 or M20.

T-Rating (doubleplay ability) — for pitchers and infielders (Catcher's are all E)

$$25 \times (\text{Player's } \frac{\text{DP}}{\text{GP}} - \text{Lea. Ave. } \frac{\text{DP}}{\text{GP}}) \times (1.1 - \frac{10}{\text{GP}})$$

If GP less than 10 use 10.

F— Catcher $(1.0 - \text{F}\% \times 2) \times 100$ roundoff
1B $(1.0 - \text{F}\% \times 2) \times 100$ roundoff
2B $(1.0 - \text{F}\%) \times 100$ roundoff minus 1
SS & 3B $(1.0 - \text{F}\%) \times 100$ roundoff minus 1
OF $(1.0 - \text{F}\%) \times 100$ roundoff minus 1, but can only be 0 if F% is .998 or above.
P $(1.0 - \text{F}\%) \times 100$ roundoff.

Round off & Round down Eg:

Round Off —1.4 is 1	Round Off —1—2.4 is 1	Round down — 1.4 is 2
1.5 is 1	—2.5 is 2	1.5 is 2
1.6 is 2	—2.6 is 2	1.9 is 2

IV. Extra Basehit # Placement

Bats Right

2B 1—
3B 41—
HR 61—

Bats Left

2B 61—
3B 41—
HR 1—

Player Ratings and Computations (for modern era)

The formulas given here will not match the ratings assigned on cards for past years because the methods have been changed and refined since a computer has been used. The 1978 Edition cards do not match in all cases and categories for the following reasons:

- The Final PC ratings for pitchers will not match because the computer uses a special math matrix for adjusting batter faced with bases empty and when men are on base. This results in a difference such as Tom Seaver in example later on where he has a PC of M8 on 1977 cards and PC of M5 in our non-computer calculations. The fewer the number of batters faced the greater is the possible difference. The final year statistics will not be much different as long as the same method is used for all players.

V. BA CARD LAYOUT — #'s following BA

- 1st # — Normal Use Disregard Pitcher's Arm.
2nd # — Against a Left-handed pitcher.
3rd # — Against a Right-handed pitcher.

BA- ADJUSMENT

From Normal BA	LEFT BATTER	RIGHT BATTER	SWITCH BATTER
1st # -	No Change	No Change	No Change
2nd # —	-4	+4	-2
3rd # —	+2	-2	+1

Player Rating and Computation Continued...

In cases where hitter is obviously poor hitter against same side pitcher you may choose to double the factors above. This will only work statistically, however, if applied to regulars or, players who are not normally benched against same side pitcher.

HOW TO DO IT!

- The first step in figuring the pitcher ratings is to establish the League Averages for each league for the year being rated.

BFP data is used in this edition as both leagues give this data for pitchers in their official statistics. In years past the AL gave only the AB data. When rating older AL seasons be sure you use the correct AB data. (See I. Pitching data for AB formula) Convert this to BFP when using formulas in this edition.

A. Pitcher rating formulas for League Average Data

W#— (W - IW + HB) divided by (BFP - IW)

Raw PC#— H divided by (AB + SF)

MOB— (ER - HR) divided by (H - HR + W - IW + HB)

SO— SO divided by (AB + SF - H)

PHR— HR divided by H

HITVAL— $1B + (2 \times 2B) + (3 \times 3B)$ divided by (H - HR)

HITVAL is the average amount of total bases per non-homerun basehit. It is usually about 1.234

NONE ON — .53609 — or probability of there being none on base.

B. Using 1980 League data for above we get these answers.

	National League	American League
W#—	.07422	.080638
Raw PC#—	.257087	.266617
MOB—	.269925	.278585
SO—	.198317	.179743
PHR—	.072326	.087985
HITVAL—	1.244747	1.240400
NONE ON—	.53609	.53609

C. Individual Pitcher Rating Formulas

Where LEAGUE is mentioned below it is quantity, or league average as figured in Section 1. A and B for the appropriate rating category.

W#— $100 \times \frac{(W - IW + HB)}{(BFP - IW)} - \text{LEAGUE}$ Round to Integer

Raw PC#— $100 \times \frac{H}{(AB + SF)} - \text{LEAGUE}$ Don't round off. Raw PC is not a final rating; it is used later with MOB to compute PC.

MOB#— $100 \times \frac{(ER - HR)}{(H - HR + W - IW - HB)} - \text{LEAGUE}$ Round to Integer

PC#— $(\frac{1}{\text{NONE ON}} \times \text{Raw PC}) - \frac{1}{(\text{NONE-ON} - 1)} \times \text{MOB}$ Round to Integer

It is a good idea never to let interval between PC and MOB in final form to exceed 30. If it does reduce plus side by 2 and minus side by 1 until the interval is no greater than 30.

SO#— $100 \times \frac{SO}{(AB + SF - H)} - \text{LEAGUE}$ Round to Integer

PHR#— $100 \times \frac{HR}{H} - \text{LEAGUE}$ Round to Integer

WP#— $(215.56 \times (\frac{4}{3} \times WP) + BK)$ divided by BFP - IW Round to Integer

SPC#— Compute "Points allowed per inning" FIRST PTS-per-IP

HITVAL $\times \frac{(H - HR) + (4 \times HR) + ER + W - IW + HB + WP + BK}{IP}$

SPC— $\frac{IP - (3 \times (G - GS))}{GS} \times \text{Pts per IP}$ Round to Integer

Player Rating and Computation Continued...

If GS is 0(zero) then SPC is 0(zero)
 If GS is less than 1.667 make it 1.667
 If SPC greater than 19, use 19 as SPC Rate

RPC#— $2 \times \text{PTS-per-IP}$ Round to Integer
 If No relief efforts then RPC is 0(zero)
 If RPC greater than 19 then use 19 as RPC Rate

2. Player Examples — Pitcher Rating Procedures

Using 1980 Season Statistics of Mike Flanagan - Baltimore, AL.

W#— $100 \times \frac{71 - 3 + 2}{1065 - 3} - .0806$ is $\frac{100 \times 70}{1062} - .0806$
 or $100 \times .0659 - .0806$ is - 1.468 W is M1

Raw PC#— $100 \times \frac{278}{970 + 12} - .2666$ is $100 \times .2830 - .2666$
 or Raw PC is 1.649

MOB#— $100 \times \frac{115 - 27}{278 - 27 + 71 - 3 + 2} - .2785$ is $\frac{100 \times 88}{321} - .2785$
 or $100 \times .2741 - .2785$ is -.435 MOB is E

PC#— $(\frac{1}{.53609} \times 1.649) - (\frac{1}{.53609 - 1}) \times 0$ is 1.86536×1.649
 or 3.075 PC is P3

SO#— $100 \times \frac{128}{970 + 12 - 278} - .1797$ is $100 \times .1818 - .1797$
 or .21 SO is E

PHR#— $100 \times \frac{27}{278} - .0879$ is $100 \times .0971 - .0879$
 or .922 PHR is P1

WP#— $215.56 \times \frac{4}{3} \times 12 + 1$ divided by 1065 - 3
 or $215.56 \times 15.96 + 1$ divided by 1062 is 3.44 WP is 3

SPC#— Pts-per-IP— $(1.2404 \times 278 - 27) + (4 \times 27) + 115 + 71 - 3 + 2 + 12 + 1$ divided by 251
 $(1.2404 \times 255) + 108 + 198$ divided by 251
 622.2 divided by 251 is 2.4788 Pts-per-IP

SPC— $\frac{251 - (3 \times 37 - 37)}{37} \times 2.4788$
 or 251 divided by 37 is 16.815 SPC is 17

RPC#— No Relief efforts so RPC is 0(zero)

Batter Rating Procedures

Using 1980 Season Statistics of Al Bumbry - Baltimore, LA (Bats Left only)

BB#— $(78 - 8 + 3)$ divided by $(645 + 9 + 3 + 78 + 3 - 8) \times 100$ is
 73 divided by 730 $\times 100$ is 10 BB is 10

HB#— 3 divided by $(78 - 8 + 3) \times 100$ is 4.10 HB is 4

BA#— 205 divided by $(645 + 3) \times 100$ is 31.63
 1st# -32; 2nd# -28; 3rd# -34;

2B#— 29 divided by 205×100 is 14.14 or 14

Player Rating and Computation Continued...

3B#—	9 divided by 205×100 is	4.39 or 4
HR#—	9 divided by 205×100 is	4.39 or 4
K#—	75 divided by $(645 + 3 - 205) \times 100$ is	16.93 or 17
GIDP#—	9 divided by $(645 + 3 - 205 - 75) \times 857.46$ is	20.97 or 21
SBA ¹ —	(44 + 11) divided by $[(205 - 47 + 78 + 3) + .08 \times (645 + 3 - 205 - 75)] \times 200$ is 55 divided by $[239 + 29.04] \times 200$ or 55 divided by 268.04×200 is 41.03 or 41	
SBA ² —	44 divided by $(44 + 11) \times 100$ is	80
RBA—	(118 - 9) + $(3 \times 9) + 44 + 11 - 9$ divided by $(205 - 9 + 78 + 3) + .06 \times (645 + 3 - 205 - 75) \times 55$ or $(182 \text{ divided by } 277 + 21.78) \times 55$ or $.609 \times 55$ is 33.5 plus 25 because 182 is more than zero. RBA is 58	
SAC#—	9 divided by $(645 + 9 + 3 - 205 - 75) \times 595.6 + 60$ or 9 divided by $372 \times 595.6 + 60$ or $.02419 \times 595.6 + 60$ is 74.4 or 74	

FIELDER RATING PROCEDURES

T-Rates

Catcher— Dempsey - Baltimore, AL
 $100 \times [.4107 - (54 \text{ divided by } 112)] + 5.5 - (112 \text{ divided by } 8)$ is
 $100 \times -.0714$ is $(-7.14) + (-8.50)$ is 15.64 or M16

Outfielder— Bumbry, Baltimore, AL
 $100 \times [.0674 - (7 \text{ divided by } 124)] + 5.5 - (124 \text{ divided by } 8)$ is
 $100 \times .0109 + (-10.0)$
 $1.0948 + (-10.0)$ is -8.91 or M9

Infielder— Belanger - Baltimore, AL Shortstop

$$25 \times \frac{49}{109} - .5937 \times 1.1 - \frac{10}{109} \text{ or}$$

$$25 \times -.1441 \times 1.008 \text{ is } -3.632 \text{ or M4}$$

Fielding Rate

J. Bench
 F = GP-128, C, F% .997, A 60 — (1976 Statistics)
 Catcher $(1.0 - F\% \times 2) \times 100$
 $(1.0 - .997 \times 2) \times 100$ is .6 F rate is 1

L. Brock
 F = GP 123, OF, F% .983, A 6, (1976 Statistics)
 OF $(1.0 - F\%) = 100$
 $(1.0 - .983) \times 100$ is 1.70 (-1) F Rate is 1