

10.3 Exercises



Hitting Statistics The 2010 hitting statistics of 10 Major League Baseball players are shown. In Exercises 1–6, use a spreadsheet. (See Examples 1 and 2.)

PLAYER	TEAM	POS	G	AB	R	H	2B	3B	HR	RBI	TB	BB	SO	SB	CS	SF	HBP
M Cabrera	DET	1B	150	548	111	180	45	1	38	126	341	89	95	3	3	8	3
S Choo	CLE	OF	144	550	81	165	31	2	22	90	266	83	118	22	7	2	11
P Fielder	MIL	1B	161	578	94	151	25	0	32	83	272	114	138	1	0	1	21
J Hamilton	TEX	OF	133	518	95	186	40	3	32	100	328	43	95	8	1	4	5
J Mauer	MIN	C	137	510	88	167	43	1	9	75	239	65	53	1	4	6	3
J Morneau	MIN	1B	81	296	53	102	25	1	18	56	183	50	62	0	0	2	0
A Pujols	STL	1B	159	587	115	183	39	1	42	118	350	103	76	14	4	6	4
J Thome	MIN	DH	108	276	48	78	16	2	25	59	173	60	82	0	0	2	2
J Votto	CIN	1B	150	547	106	177	36	2	37	113	328	91	125	16	5	3	7
K Youkilis	BOS	1B	102	362	77	111	26	5	19	62	204	58	67	4	1	5	10

- Which player had the greatest batting average (AVG) in 2010?
- Slugging percentage (SLG) is a statistic used to measure the power of a hitter. The formula to calculate slugging percentage is shown. Find the slugging percentage for each player.

$$SLG = \frac{TB}{AB}$$

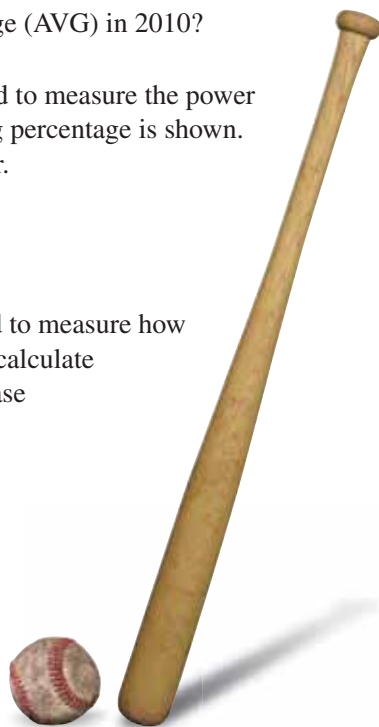
- On-base percentage (OBP) is a statistic used to measure how often a player reaches base. The formula to calculate on-base percentage is shown. Find the on-base percentage for each player.

$$OBP = \frac{H + BB + HBP}{AB + BB + HBP + SF}$$

- Considering AVG, SLG, and OBP, which player would you choose as the most valuable player (MVP)? Explain your reasoning.

- Is it possible for a player to have an OBP that is less than his AVG? Explain your reasoning.

- Albert Pujols had a stolen base percentage (SB%) of 77.8%. Write a formula using abbreviations to calculate SB%.



Abbreviations

2B	Doubles
3B	Triples
AB	At Bats
AVG	Batting Average
BB	Bases on Balls (Walks)
CS	Caught Stealing
G	Games Played
H	Hits
HBP	Hit by Pitch
HR	Home Runs
OBP	On-base Percentage
R	Runs Scored
RBI	Runs Batted In
SB%	Stolen Base Percentage
SB	Stolen Bases
SF	Sacrifice Flies
SLG	Slugging Percentage
SO	Strikeouts
TB	Total Bases
TPA	Total Plate Appearances