



SLUGGING PERCENTAGE

Slugging percentage is almost like batting average, but it also considers what types of hit a player gets.

To calculate slugging percentage, use the chart below to find a player's total bases.

Single: the player makes it to 1st base.	Multiply the number of times he hit a single by 1 .
Double: the player makes it to 2nd base.	Multiply the number of times he hit a double by 2 .
Triple: the player makes it to 3rd base.	Multiply the number of times he hit a triple by 3 .
Home Run: the player makes it to home.	Multiply the number of times he hit a home run by 4 .

Example:

Ben and Andre both have a batting average of .300, but Ben hits almost all singles and Andre hits more doubles and home runs. This means Andre's slugging percentage is higher than Ben's, since he has more total bases.

Calculate Andre's slugging percentage by adding together his total bases from his three most recent games. Out of **16** at-bats, he had **2** singles, **1** double and **2** home runs. Multiply these by the number of bases in the type of hit. (See the chart above if you need help!)

$$2 \text{ singles} \times 1 \text{ base} = 2 \text{ bases}$$

$$1 \text{ double} \times 2 \text{ bases} = 2 \text{ bases}$$

$$0 \text{ triples} \times 3 \text{ bases} = 0 \text{ bases}$$

$$2 \text{ home runs} \times 4 \text{ bases} = 8 \text{ bases}$$

$$2+2+0+8 = 12 \text{ total bases}$$

Divide Andre's total bases by the number of times he batted.

$$12 \div 16 = .750 \text{ slugging percentage}$$





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Use the information in the table below to find the slugging percentages for these players from the Medford Miners. See the previous page if you need help!

PLAYER	SINGLES	DOUBLES	TRIPLES	HOME RUNS	AT-BATS	BATTING AVERAGE	SLUGGING %
Casey	2	2	0	0	15	.267	
Duane	3	1	1	0	15	.333	
Everett	1	0	0	1	12	.250	
Brad	3	0	0	1	14	.286	
Nolan	3	0	0	0	15	.200	
Mark	1	2	0	1	15	.333	

Once you've found them, answer the questions below.

1. Duane and Mark both have .333 batting averages. Who has the higher slugging percentage?
2. Who has the highest slugging percentage *without* hitting a home run?
3. There's one player who has a higher batting average but lower slugging percentage than another player. Who is it?





"THE SPEEDSTER"

Meet Damon, also known as "The Speedster." He has plenty of other nicknames: "Flash," "Lightning," "Sweet Feet" and "Wheels." He's the fastest runner in professional baseball!

However, even Damon gets thrown out sometimes when he's trying to steal a base. In baseball, **stolen base percentage** shows how often a player is successful when trying to steal a base.

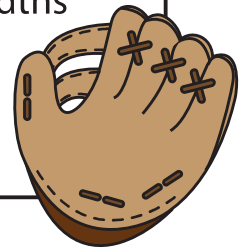
Here's how you find it:

Divide the number of steals by the number of stealing attempts.
Here's Damon's first season as an example:

$$23 \text{ stolen bases} \div 39 \text{ stealing attempts} = .589744$$

It's expressed the same as batting average, with three digits to the right of the decimal point. Round the number to the thousandths place.

$$.589744 \rightarrow .590$$



Find Damon's stolen base percentage and fill out this chart, then answer the questions on the next page.

Season	Steals	Stealing Attempts	SB%
1	23	39	.590
2	34	58	
3	31	52	
4	25	38	
5	22	30	
6	24	31	
7	21	28	





"THE SPEEDSTER"

1. In which season did Damon steal the most bases?
2. In which season did Damon attempt the most steals?
3. In which season did Damon record his best stolen base percentage?
4. If you were Damon's coach, would you tell him to attempt more or fewer steals each season? Why?
5. What do you notice about these statistics?





WHAT SHOULD THE MANAGER DO?

Baseball is a game of strategy, and managers use numbers to decide their strategy. One group of numbers that they look to is the “splits” or “lefty-righty.” For batters, splits show how well the batter does against right-handed pitchers and left-handed pitchers. Pitchers also have split statistics, showing how well they do against right-handed batters and left-handed batters. Most batters do better against opposite-handed pitchers (for example, a right-handed batter would have a better average against a lefty).

Here’s a table showing a group of batters and their batting averages against right-handed pitchers (RHP) and left-handed pitchers (LHP). The letters next to the players’ names are for right-handed or left-handed.

PLAYER	vs. RHP	vs. LHP
Trent (R)	.223	.314
Pete (L)	.279	.246
Wade (R)	.250	.306

If you were the manager, and you could choose one of these batters to face a right-handed pitcher, who should you choose?





WHAT SHOULD THE MANAGER DO?

Let's make this tougher! This is the lineup for the Nighthawks, listed in its batting order. You are the manager for the Eagles.

ORDER	PLAYER	vs. RHP	vs. LHP
1	Trent (R)	.223	.314
2	Pete (L)	.279	.246
3	Wade (R)	.250	.306
4	Percy (R)	.276	.299
5	Toby (L)	.300	.283
6	Micah (L)	.257	.262
7	Vicente (R)	.212	.253
8	Eldon (R)	.240	.249

1. Would you choose a righty or a lefty to start the game against the Nighthawks?
2. There is one out in the 7th inning, and you can bring in a new pitcher to face two batters: Toby and Micah. Would you call in the lefty or the righty?
3. It's crunch time! You are starting the 9th inning with a new pitcher to face three batters: Wade, Percy and Toby. Are you choosing the lefty or the righty?
4. Which Nighthawks player has the biggest difference between his splits? Who has the smallest difference?





YOU MAKE THE CALL!

For once, there are no wrong answers! It's time for you to decide how to answer these questions.

Baseball is unpredictable. That's one great thing about it. You never know what you're going to see! Look at these standings for the first half of season (81 games). In the second half, each team will be playing 81 more games. Answer the questions below, but make sure you have a reason for your answer. Ask your family or friends what they think.

Team	Wins	Losses
Cobras	51	30
Mustangs	49	32
Hornets	43	38
Pilots	40	41
Cougars	40	41
Bobcats	37	44
Firebirds	35	46
Panthers	33	48



1. The Cobras will play the Cougars three more times. How many games will the Cobras win?
2. The Hornets will play the Panthers five more times. How many games will the Hornets win?





YOU MAKE THE CALL!

3. You have to predict which team will end the season with the most wins. Here are your options:

- Option 1: Cobras
- Option 2: Mustangs **or** Hornets
- Option 3: Any of the other five teams

Which option do you choose?

4. During the first half of the season, the Cougars played the Mustangs six times. The Cougars won five of those games. In the second half, they'll play against each other six more times. How many of those games do you think the Cougars will win?

5. Which of these two scenarios is more likely to happen?

- The Firebirds end the season with more wins than the Cobras.
- The Pilots ends the season with the most wins.

6. Which of these two scenarios is more likely to happen?

- The Bobcats end the season with fewest wins **and** the Mustangs end the season with the most wins
- The Panthers end the season with the fewest wins **and** the Pilots end the season with the most wins





JUST FOR FUN!

Directions: Put the numbers in order from least to greatest, then enter them in order in the table below. Use the code to solve the riddle!

.8 .75 .13 9/10 .25 1/3 3/10 .1 5/9 1/2

B	P	U	D	Y	L	E	L	O	A



Man's best friend is a dog. Pitcher's best friend is a...

3/10	.8	.25	.1	1/2	5/9	---	.13	.75	9/10	1/3



Great job!

_____ is an Education.com math superstar

