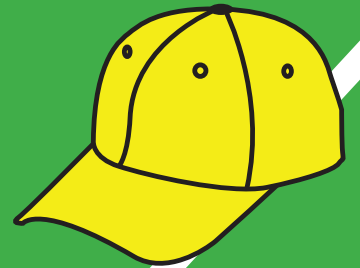


Baseball Math

5th
Grade



$$\begin{array}{r} \text{Hits} \quad (2 + 1) = 3 \\ \hline \text{At-Bats} \quad (4 + 3) = 7 \end{array}$$

$$3 \div 7 = 0.4285$$

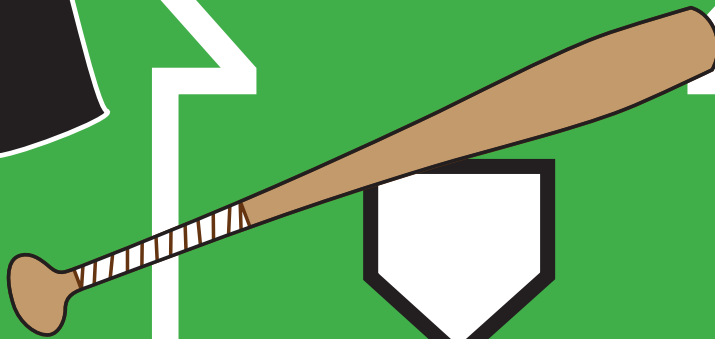


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INTRODUCTION

Baseball is a sport with fans who speak in numbers—scores, stats, and averages. How do the fans come up with these numbers, and can you make sense of them?

If you know the rules of baseball, you'll have a head start. If you don't know much about baseball, don't worry! Read this page to learn some of the words and phrases that will come up in this book.

"Pitcher" and "Batter"	In the middle of the baseball diamond stands the pitcher, and every play begins with the ball in his hand. Baseball is one of the only sports where the defense has the ball. The pitcher hurls the ball with great speed (sometimes faster than 100 miles per hour!), to home plate, where the batter (or "hitter") tries to hit the ball with a bat.
"Hits" and "Outs"	After the batter hits the ball, he runs to first base. If a defensive player (or "fielder") catches the ball in the air, the batter is out. If the defense gets the ball and tags first base before the batter gets there, the batter is out. If nobody catches the ball and nobody can throw to first base in time, the batter got a "hit." Once he's on the bases, he tries to run around the bases and back to home plate.



<p>“Runs”</p>	<p>If the batter can make it around the bases to home plate, he scores a “run.” In baseball: points aren’t scored when a team gets a ball into a goal. Points are scored by a human running on a plate, no matter where the ball is. The team with the most runs at the end of the game wins.</p>
<p>“Home Runs”</p>	<p>The biggest hit of all is the “home run.” When a batter hits a ball over the fence, it’s a home run. He can take his time rounding the bases and scoring at home plate.</p>
<p>“Innings”</p>	<p>There is no clock in baseball. Instead, there are nine “innings.” Each team gets to bat in an inning. Once a team makes three outs, the other team comes to bat. If the game is tied after nine innings, it keeps going into “extra innings” until one team has more runs than the other. There’s no crying in baseball, and there’s no tying either.</p>

These are just the basics

These terms will help you in this workbook, but there’s so much more to know about baseball. There are strikeouts, wild pitches, doubleheaders, double plays, ground rule doubles and Uncle Charlies. Batters love to hit bombs, blasts, taters, goners, jacks and dingers, but they can’t stand hitting cans of corn or whiffing altogether. Pitchers throw cutters, sliders and curves, but they usually just throw stinky cheese. Runners might get into a pickle, but they’re usually safe on a squeeze. Baseball sounds strange, but it’s all kinds of fun!





SNACK BAR MATH

Do you know how much your favorite baseball game meal costs when sales tax is added? At the Kalamazoo Tigers game, sales tax on food is *10 percent*.

Examples:

1. James wants to buy a bag of peanuts, which costs \$2.00 plus tax. How much will the peanuts cost with tax?

Start by multiplying the cost by 10 percent to find out the tax added:

$$\$2.00 \times .10 = .20$$

Then, add the tax to the cost:

$$\$2.00 + .20 = \$2.20$$

2. Terrence wants a hot dog (\$3.00) and a small soda (\$3.00).

Because this problem has two food items, add the cost of them together first:

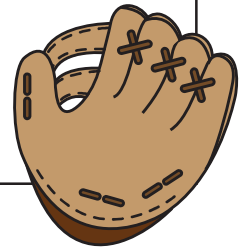
$$\$3.00 + \$3.00 = \$6.00$$

Then multiply your answer by .10:

$$\$6.00 \times .10 = .60$$

Then, find the sum:

$$\$6.00 + .60 = \$6.60$$



Now, find cost of food for the rest of people in line.

1. Megan wants to buy a small soda (\$3.00) and a small popcorn (\$2.00). How much will this cost with tax?
2. Stephen is buying food for himself and his brother. He wants a hot dog (\$4.00) and a small soda (\$3.00) and his brother wants a cheeseburger (\$5.00) and a large soda (\$4.00).
3. Amanda wants a churro (\$3.50) and peanuts (\$2.00).
4. Jamal wants a hot dog (\$4.00), a churro (\$3.50) and a small soda (\$3.00).
5. Ricky wants to buy a hot dog for himself and for all four friends who he brought with him to the game. That's five hot dogs at \$3.00 each.





ATTENDANCE & TV VIEWING

Directions: Use your addition, multiplication, and estimation skills to complete the following problems.

1. The El Paso Elephants are hoping to sell about 2 million tickets this season. After 20 games at home, they want to find out if they will meet this goal. They've sold about 25,000 tickets at each game. They have 65 more home games to go, and they expect about the same number of people will come to every game. At the end of the season, will they have sold 2 million tickets?

2. The Worldwide Baseball League wants to know how many people are watching their games on TV. There are 12 games tonight, and about 1.5 million fans tune in for each game aired. How many people in total are watching baseball?





ATTENDANCE & TV VIEWING

Later in the season, the league found more specific numbers for their viewership. Use the information below to find out how many people are watching each game.

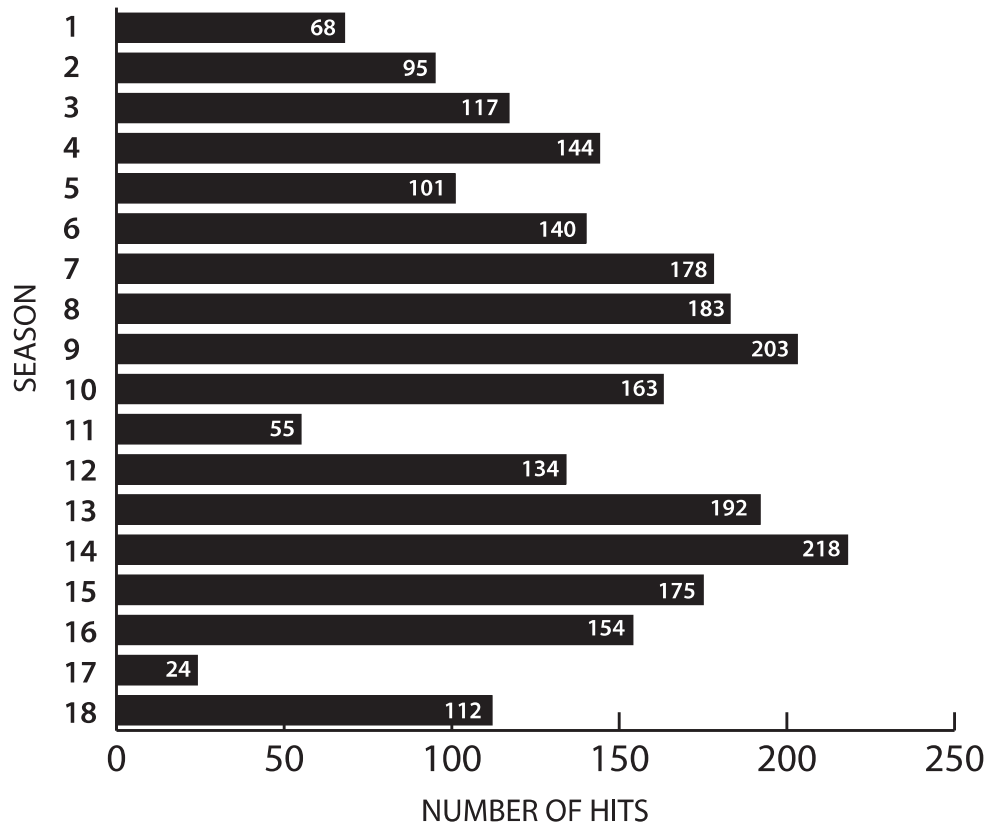
1. For 12 different games, about 1.3 million fans watched each one. How many watched in total?
2. For 5 of the games, about 1.2 million fans watched each one. How many watched in total?
3. For 2 of the games, about 1.9 million fans watched each one. How many watched in total?
4. About 2 million fans total have watched all of the El Paso Elephants' games so far this season. About 1.2 million fans have watched all of the Nacogdoches Warriors' games so far. All together, the Elephants and the Warriors have played a total of 20 games. On average, how many people have watched each game?





BENNY'S HITS

Directions: Benny has spent 18 years in pro baseball, and he's calling it a career and becoming the team's hitting coach. Look at this chart of his hit totals in each of his 18 seasons, and answer the questions.



1. How many times did Benny reach 150 hits?
2. What was the first year he reached 150 hits? Which was the last?
3. How many more hits did Benny have in year 14 than he had in year 13?
4. Find Benny's average number of hits per season.
5. Benny missed a lot of games in his first season because he joined the pro team near the end of the season. In seasons 2, 5, 11 and 17, he missed a lot of games because he was hurt. Ignoring these five seasons, find Benny's average number of hits in the 13 other seasons.
6. Look closely at the numbers for the seasons when Benny was hurt. What trends do you notice?





ROUNDING DECIMALS

Round these numbers to **whole numbers**:

287.32

901.8

12.0913442

6,843.36

37.9

Round these numbers to the **tenths place**:

12.80234

453.36

1.97

56.873

9,308.34

Round these numbers to the **hundredths place**:

45.1074

9.008

412.3903

0.352

706.429

Round these numbers to the **thousandths place**:

908.87321

4.50892

32.8543

0.2666666

812.3845

