

# Answer Sheets

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# Answer Sheet



## 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:

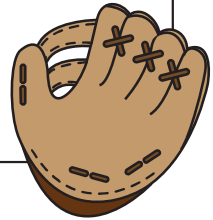
$$\$3.00 + \$3.00 = \$6.00$$

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?

$$\$3.00 + \$2.00 = \$5.00; \$5.00 \times .10 = .50; \$5.00 + .50 = \$5.50$$

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).

$$\$4.00 + \$3.00 + \$5.00 + \$4.00 = \$16.00; \$16.00 \times .10 = \$1.60; \$16.00 + \$1.60 = \$17.60$$

3. Amanda wants a churro (\$3.50) and peanuts (\$2.00).

$$\$3.50 + \$2.00 = \$5.50; \$5.50 \times .10 = .55; \$5.50 + .55 = \$6.05$$

4. Jamal wants a hot dog (\$4.00), a churro (\$3.50) and a small soda (\$3.00).

$$\$4.00 + \$3.50 + \$3.00 = \$10.50; \$10.50 \times .10 = \$1.05; \$10.50 + \$1.05 = \$11.55$$

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.

$$5 \times \$3.00 = \$15.00; \$15.00 \times .10 = \$1.50; \$15.00 + \$1.50 = \$16.50$$



# Answer Sheet



## 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?

**Answer: Yes!**

**How many games?  $20 + 65 = 85$**

**$25,000 \times 85 = 2,125,000$**

**Even if their estimate of 25,000 tickets per game is a bit high, there is still a good chance they'd sell 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?

**$12 \times 1,500,000 = 18,000,000$  or 18 million**



# Answer Sheet



## 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?

$$12 \times 1,300,000 = 15,600,000$$

2. For 5 of the games, about 1.2 million fans watched each one. How many watched in total?

$$5 \times 1,200,000 = 6,000,000$$

3. For 2 of the games, about 1.9 million fans watched each one. How many watched in total?

$$2 \times 1,900,000 = 3,800,000$$

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?

$$2,000,000 + 1,200,000 = 3,200,000$$

$$3,200,000 \div 20 = 160,000$$

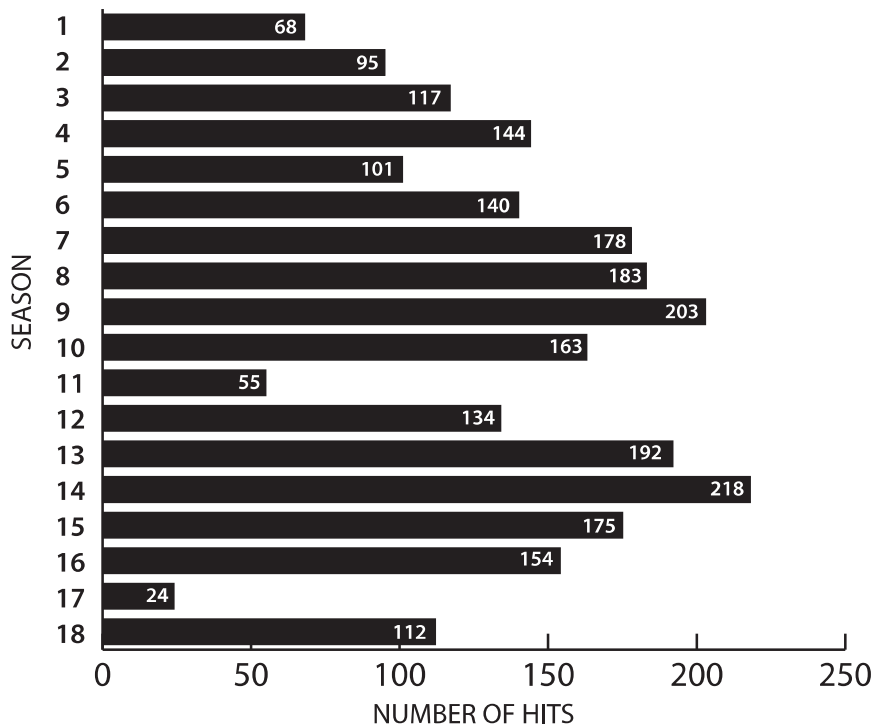


# Answer Sheet



## 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? **8**
2. What was the first year he reached 150 hits? Which was the last? **Year 7; Year 16**
3. How many more hits did Benny have in year 14 than he had in year 13? **26**
4. Find Benny's average number of hits per season.  **$2456/18=136$**
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.  **$2113/13=163$**
6. Look closely at the numbers for the seasons when Benny was hurt. What trends do you notice? **He always had low hit numbers the year after the years he was injured. Then, his numbers steadily rose to a peak number, and then steadily dropped back down before another injury. These are just two trends to notice. You may notice something different!**



# Answer Sheet



## ROUNDING DECIMALS

Round these numbers to **whole numbers**:

$$287.32 = 287$$

$$901.8 = 902$$

$$12.0913442 = 12$$

$$6,843.36 = 6,843$$

$$37.9 = 38$$

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

$$12.80234 = 12.8$$

$$453.36 = 453.4$$

$$1.97 = 2.0$$

$$56.873 = 56.9$$

$$9,308.34 = 9,308.3$$

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

$$45.1074 = 45.11$$

$$9.008 = 9.01$$

$$412.3903 = 412.39$$

$$0.352 = 0.35$$

$$706.429 = 706.43$$

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

$$908.87321 = 908.873$$

$$4.50892 = 4.509$$

$$32.8543 = 32.854$$

$$0.2666666 = 0.267$$

$$812.3845 = 812.385$$



# Answer Sheet



## RANKING BATTING AVERAGES

In this workbook, you will need to know how to rank decimals. Here's how:

. 3 1 8  
↑ ↑ ↑ ↑

- **First arrow: Decimal point**
- **Second arrow (pointing to 3): Tenths place**
- **Third arrow: Hundreds Place**
- **Fourth arrow: Thousands Place**

Which decimal is larger: .318 or .313? The first two digits are the same, so we can move on to the third. Since 8 is higher than 3, .318 is higher than .313.

Practice ranking the averages for the Ocean City Crabs using the table below. Rewrite the batting averages for the players in order from highest to lowest in the blank table on the right.

PLAYER	AVERAGE
Leo	.290
Israel	.234
Floyd	.301
Russell	.282
Jeremy	.217
Dennis	.345
Elijah	.254
Abel	.287
Santos	.293
Gregg	.314
Tom	.235
Alex	.256
Jay	.308

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# Answer Sheet



## CALCULATING BATTING AVERAGE

**Batting average** is a number that shows how many of a player's at-bats result in a base hit.

Calculating batting average is easy! Divide a player's **base hits** by his number of **at-bats**.

### Example:

Jimmy had **20** at-bats and **6** base hits:

$$6 \div 20 = 0.3$$

That means Jimmy got a hit **30 percent** of the time, but batting average is expressed in decimals. To write Jimmy's batting average, convert the percentage to a decimal to the thousandth place.

Remember: don't write a 0 before the decimal point!

$$30\% = .300$$

Talking about averages is a different story! To say it out loud, say "three hundred". An average of .275 is "two seventy-five", and a .238 is "two thirty-eight", and so on.

Express the percentages below as written and spoken batting averages!

**50 percent**

Written: .500

Spoken: Five hundred

**29 percent**

Written: .290

Spoken: Two ninety

**35 percent**

Written: .350

Spoken: Three fifty

**45 percent**

Written: .450

Spoken: Four fifty





# Answer Sheet



## CALCULATING BATTING AVERAGE

Sometimes the decimal you calculate will go far beyond the thousandths place! Make sure to round it up or down.

0.256146    0.256    .256 or "Two fifty-six"



**Calculate** the batting averages of these players.

1. Carlos had 7 base hits in 19 at-bats.  
 $7 / 19 = 0.3684210 = .368$  "three sixty-eight"
2. Jeff had 8 base hits in 24 at-bats.  
 $8 / 24 = 0.3333333 = .333$  "three thirty-three"
3. Michael had 5 base hits in 20 at-bats.  
 $5 / 20 = 0.25 = .250$  "two fifty"
4. Andrew had 10 base hits in 23 at-bats.  
 $10 / 23 = 0.4347826 = .435$  "four thirty-five"
5. Rafael had 9 base hits in 21 at-bats.  
 $9 / 21 = 0.4285714 = .429$  "four twenty-nine"
6. Paul had 13 base hits in 30 at-bats.  
 $13 / 30 = 0.4333333 = .433$  "four thirty-three"



# Answer Sheet



## FIND THE MISSING NUMBERS

**The Poughkeepsie Pilots** played a three-game series against the Bowie Badgers, and this is a table of their hits, at-bats and batting averages. But the Badgers must have taken a bite of this scorecard, because some of the numbers are missing! Fill in the missing numbers.



PLAYER	HITS	AT-BATS	BATTING AVERAGE
Desmond	3	9	.333
Chris	6	12	.500
Omar	2	8	.250
Quan	6	15	.400
Matthew	2	12	.167
Leonard	3	10	.300
Oliver	3	12	.250
William	2	10	.200
Darrell	4	13	.308
<b>TOTALS</b>	<b>31</b>	<b>101</b>	<b>.307</b>

