

Chapter 5**Ratios and Rates**

Date:

5.6 Solving Percent Problems**Essential Question****How can you use percents to solve real world problems?****Turning Percents into Decimals****Step 1: Turn the percent into a fraction.**

$$15\% = \frac{15}{100}$$

Step 2: Divide the numerator by the denominator.

$$\begin{array}{r} 0.15 \\ 100 \overline{) 15.00} \\ \underline{-100} \\ 500 \\ \underline{-500} \\ 0 \end{array}$$

$$15\% = 0.15$$

Find a decimal for each percent.

1) $47\% = \frac{47}{100} = 0.47$

2) $82\% = \frac{82}{100} = 0.82$

3) $115\% = \frac{115}{100} = 1.15$

Complete numbers 1 - 3 on your notes page.
Find the decimal for each percent.

$$1) \quad 34\% = \frac{34}{100} = 0.34$$

$$2) \quad 23\% = \frac{23}{100} = 0.23$$

$$3) \quad 382\% = \frac{382}{100} = 3.82$$

**Finding
the
percent
of a
number**

How can you find the percent of a number?

20% of 60 is what number?

Step 1: Write the percent as a decimal.

0.20 of 60 is what number?

Step 2: Then multiply by the whole.

★ of means multiply

$$0.2 \times 60 = 12$$

The percent times the whole equals the part.

20% of 60 is 12.

Complete numbers 4 - 6 in your composition book.

4) 40% of 20 is what number?

$$.40 \times 20 = 8$$

5) 55% of 90 is what number?

$$.55 \times 90 = 49.5$$

6) 124% of 50 is what number?

$$1.24 \times 50 = 62$$

Complete numbers 4 - 6 on your notes page.

4) 90% of 60 is what number?

$$.90 \times 60 = 54$$

5) 75% of 32 is what number?

$$.75 \times 32 = 24$$

6) 132% of 80 is what number?

$$1.32 \times 80 = 105.6$$

Complete number 7 in your composition book.

- 7) You go shopping for a new pair of jeans. The jeans you want cost \$35. There is a sale going on and the jeans are 15% off. How much will you save?**

15% of 35 is how much?

$$.15 \times 35 = 5.25$$

You will save \$5.25.

Complete number 7 on your notes page.

- 7) A new computer costs \$699. This week there is a sale for 25% off. How much will you save?**

25% of 699 is how much?

$$.25 \times 699 = 174.75$$

You will save \$174.75.

Complete numbers 8 - 9 in your composition book.

8) 75% of what number is 48?

$$\frac{.75n}{.75} = \frac{48}{.75}$$

$$n = 64$$

9) 120% of what number is 72?

$$\frac{1.2n}{1.2} = \frac{72}{1.2}$$

$$n = 60$$

Complete numbers 8 - 10 on your notes page.

8) 5% of what number is 10?

$$\frac{.05n}{.05} = \frac{10}{.05}$$

$$n = 200$$

9) 62% of what number is 31?

$$\frac{.62n}{.62} = \frac{31}{.62}$$

$$n = 50$$

10) 25% of what number is 18.75?

$$\frac{.25n}{.25} = \frac{18.75}{.25}$$

$$n = 75$$

Complete number 10 in your composition book.

- 10) You budget 33% of your salary for housing. You spend \$1,650 each month for rent. How much money do you have to earn each month?

33% of your earnings is \$1,650?

$$\frac{.33n}{.33} = \frac{1650}{.33}$$

$$n = \$5000$$

Complete number 11 your notes page.

- 11) You spend 65% of your savings on a new bike. You spend \$325. How much money was in your savings before you bought the bike?

65% of your savings is \$325?

$$\frac{.65n}{.65} = \frac{325}{.65}$$

$$n = 500$$