

**LESSON**  
**8-9** **Practice B**  
**Percent Problems**

Find the percent of each number.

1. 8% of 40 \_\_\_\_\_
  2. 105% of 80 \_\_\_\_\_
  3. 35% of 300 \_\_\_\_\_
  4. 13% of 66 \_\_\_\_\_
  5. 64% of 50 \_\_\_\_\_
  6. 51% of 445 \_\_\_\_\_
  7. 14% of 56 \_\_\_\_\_
  8. 98% of 72 \_\_\_\_\_
  9. 24% of 230 \_\_\_\_\_
  10. 35% of 225 \_\_\_\_\_
  11. 44% of 89 \_\_\_\_\_
  12. 3% of 114 \_\_\_\_\_
  13. 70% of 68 \_\_\_\_\_
  14. 1.5% of 300 \_\_\_\_\_
  15. 85% of 240 \_\_\_\_\_
  16. 47% of 13 \_\_\_\_\_
  17. 20% of 522 \_\_\_\_\_
  18. 2.5% of 400 \_\_\_\_\_
19. Jenna ordered 28 shirts for her soccer team. Seventy-five percent of those shirts were size large. How many large shirts did Jenna order?
- \_\_\_\_\_
20. Douglas sold 125 sandwiches to raise money for his boy scout troop. Eighty percent of those sandwiches were sold in his neighborhood. How many sandwiches did Douglas sell in his neighborhood?
- \_\_\_\_\_
21. Samuel has run for 45 minutes. If he has completed 60% of his run, how many minutes will Samuel run in all?
- \_\_\_\_\_

**LESSON Practice B**  
**8-9 Percent Problems**

Find the percent of each number.

- 8% of 40 3.2
- 105% of 80 84
- 35% of 300 105
- 13% of 66 8.58
- 64% of 50 32
- 51% of 445 226.95
- 14% of 56 7.84
- 98% of 72 70.56
- 24% of 230 55.2
- 35% of 225 78.75
- 44% of 89 39.16
- 3% of 114 3.42
- 70% of 68 47.6
- 1.5% of 300 4.5
- 85% of 240 204
- 47% of 13 6.11
- 20% of 522 104.4
- 2.5% of 400 10

19. Jenna ordered 28 shirts for her soccer team. Seventy-five percent of those shirts were size large. How many large shirts did Jenna order?  
**21 large shirts**

20. Douglas sold 125 sandwiches to raise money for his boy scout troop. Eighty percent of those sandwiches were sold in his neighborhood. How many sandwiches did Douglas sell in his neighborhood?  
**100 sandwiches**

21. Samuel has run for 45 minutes. If he has completed 60% of his run, how many minutes will Samuel run in all?  
**75 minutes**

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**LESSON Practice C**  
**8-9 Percent Problems**

Find the percent of each number.

- 22% of 22 4.84
- 147% of 600 882
- 16% of 48 7.68
- 65% of 1,185 770.25
- 96% of 12 11.52
- 9% of 29 2.61
- 25% of 455 113.75
- 77% of 326 251.02
- 87% of 113 98.31
- 15.6% of 470 73.32
- 92% of 514 472.88
- 2.5% of 16 0.4
- 7.2% of 65 4.68
- 84.2% of 65 54.73
- 4.5% of 880 39.6
- 36.8% of 400 147.2
- 6.5% of 250 16.25
- 211% of 22 46.42

19. The soccer team ordered 140 T-shirts to sell at the school fair. Oh those T-shirts, 50% are white, 20% are blue, 15% are green, 10% are red, and 5% are black. How many black T-shirts did the soccer team order? how many red?  
**7 black T-shirts and 14 red T-shirts**

20. The Johnsons ordered new carpet for their family room. They paid 33% of the total cost when they ordered it, and will pay the remaining amount when the carpet is delivered. If they paid \$192.72 when they ordered the carpet, how much will they pay when it is delivered?  
**\$391.28**

21. The city is going to raise its sales tax from 6.25% to 8.5% after the first of the year. How much tax would someone save on a \$19,540 car if they bought the car before the first of the year rather than after the first of the year?  
**\$439.65**

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**LESSON Reteach**  
**8-9 Percent Problems**

You can use proportions to solve percent problems.

To find 25% of 72, first set up a proportion.

$$\frac{25}{100} = \frac{x}{72}$$

$$25 \cdot 72 = 100 \cdot x$$

Next, find cross products.

$$1,800 = 100x$$

$$\frac{100x}{100} = \frac{1,800}{100}$$

$$x = 18$$

Then solve the equation.

So, 18 is 25% of 72.

**Use a proportion to find each number.**

- Find 3% of 75. 2.25
- Find 15% of 85. 12.75
- Find 20% of 50. 10
- Find 6% of 90. 5.4

You can use multiplication to solve percent problems.

To find 9% of 70, first write the percent as a decimal.

$$9\% = 0.09$$

Then multiply using the decimal.

$$0.09 \cdot 70 = 6.3$$

So, 9% of 70 = 6.3.


**Use multiplication to find each number.**

- Find 80% of 48. 38.4
- Find 6% of 30. 1.8
- Find 40% of 120. 48
- Find 20% of 98. 19.6
- Find 70% of 70. 49
- Find 35% of 120. 42
- Find 9% of 50. 4.5
- Find 40% of 150. 60

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**LESSON Challenge**  
**8-9 Pet Percentages**

The United States Census Bureau counts all the people in the United States—but they do not count our pets! So, veterinarians use the percents shown in the table below to estimate pet populations. Their estimated U.S. pet population data is based on the 2000 census, which counted about 106 million households in the United States.



**U.S. Pet Census, 2000**

Pet	Percent of all Households	Estimated U.S. Pet Population
Dogs	53%	56,180,000
Cats	60%	63,600,000
Birds	13%	13,780,000
Horses	4%	4,240,000

**Use the percents to estimate the number of pets that your class owns altogether, and the number of pets that your school owns altogether. Let each student in your class and each student in your school represent 1 household.**

**My Class and School Pet Population**

Pet	Estimated Class Pet Population	Estimated School Pet Population
Dogs	<b>15.9</b>	<b>106</b>
Cats	<b>18</b>	<b>120</b>
Birds	<b>3.9</b>	<b>26</b>
Horses	<b>1.2</b>	<b>8</b>

**Answers will vary depending on the number of students in the class and the number of students in the school. Example answers are given for a 30-student class and a 200-student school.**

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