Lesson 2-4 *The Percent Equation*

> To solve any type of percent problem, you can use the **percent equation**, part = percent • whole, where the percent is written as a decimal.

Example 1

600 is what percent of 750?

600 is the part and 750 is the whole. Let n represent the percent.

$\underbrace{\text{part}} = \underbrace{\text{percent}} \cdot \underbrace{\text{whole}}$

$\underbrace{600} = \underbrace{n} \cdot \underbrace{750}$ Write the percent equation.

$\dfrac{600}{750} = \dfrac{750n}{750}$ Divide each side by 750.

$0.8 = n$ Simplify.

$80\% = n$ Write 0.8 as a percent. So, 600 is 80% of 750.

Example 2

45 is 90% of what number?

45 is the part and 90% or 0.9 is the percent. Let w represent the whole.

$\underbrace{\text{part}} = \underbrace{\text{percent}} \cdot \underbrace{\text{whole}}$

$\underbrace{45} = \underbrace{0.9} \cdot \underbrace{w}$ Write the percent equation.

$\dfrac{45}{0.9} = \dfrac{0.9w}{0.9}$ Divide each side by 0.9.

$50 = w$ Simplify. So, 45 is 90% of 50.

Exercises

Write an equation for each problem. Then solve. Round to the nearest tenth if necessary.

1. What percent of 56 is 14?

2. 36 is what percent of 40?

3. 80 is 40% of what number?

4. 65% of what number is 78?

5. What percent of 2,000 is 8?

6. What is 110% of 80?

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Lesson 4 Skills Practice

The Percent Equation

Write an equation for each problem. Then solve. Round to the nearest tenth if necessary.

1. 25% of 176 is what number?

2. What is 90% of 20?

5. What is 60% of 45?

6. 9 is what percent of 30?

9. 2% of what number is 5?

10. 15% of 290 is what number?

13. 344.8 is what percent of 862?

14. 6% of what number is 21?

17. Find 30% of 70.

18. What is 80% of 65?