NAME _____ DATE _____ PERIOD _____

Lesson 4 Reteach

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.

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

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

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

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

$14 = n \cdot 56$; 25%

2. 36 is what percent of 40?

$36 = n \cdot 40$; 90%

3. 80 is 40% of what number?

$80 = 0.4 \cdot w$; 200

4. 65% of what number is 78?

$78 = 0.65 \cdot w$; 120

5. What percent of 2,000 is 8?

$8 = n \cdot 2{,}000$; 0.4%

6. What is 110% of 80?

$p = 1.1 \cdot 80$; 88

7. 85 is what percent of 170?

$85 = n \cdot 170$; 50%

8. Find 30% of 70.

$p = 0.3 \cdot 70$; 21