

LESSON
8-3

Solving Percent Problems

Reteach

You can use this proportion to solve percent problems.

$$\frac{\text{part}}{\text{total}} = \frac{\text{percent}}{100}$$

9 is what percent of 12?
 ↓ ↓ ↓
 Think: part unknown total

The number following "of" is the total.

30% of what number is 24?
 ↓ ↓ ↓
 Think: percent unknown part

$$\begin{aligned} \frac{9}{12} &= \frac{x}{100} \\ 12 \cdot x &= 9 \cdot 100 \\ 12x &= 900 \\ \frac{12x}{12} &= \frac{900}{12} \\ x &= 75 \end{aligned}$$

So, 9 is 75% of 12.

$$\begin{aligned} \frac{24}{x} &= \frac{30}{100} \\ 30 \cdot x &= 24 \cdot 100 \\ 30x &= 2,400 \\ \frac{30x}{30} &= \frac{2,400}{30} \\ x &= 80 \end{aligned}$$

So, 30% of 80 is 24.

Solve.

1. What percent of 25 is 14?
 - a. part = _____
 - b. total = _____
 - c. percent = _____
 - d. Write and solve the proportion.

Answer: _____ % of 25 is 14.

2. 80% of what number is 16?
 - a. part = _____
 - b. total = _____
 - c. percent = _____
 - d. Write and solve the proportion.

Answer: 80% of _____ is 16.

3. What percent of 20 is 11? _____
5. 15 is what percent of 5? _____

4. 18 is 45% of what number? _____
6. 75% of what number is 105? _____