

7-2**Study Guide and Intervention*****The Percent Proportion***

A percent proportion compares part of a quantity to a whole quantity for one ratio and lists the percent as a number over 100 for the other ratio.

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

Example 1 What percent of 24 is 18?

$$\frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100} \quad \text{Percent proportion}$$

Let $n\%$ represent the percent.

$$\frac{18}{24} = \frac{n}{100} \quad \text{Write the proportion.}$$

$$18 \times 100 = 24 \times n \quad \text{Find the cross products.}$$

$$1,800 = 24n \quad \text{Simplify.}$$

$$\frac{1,800}{24} = \frac{24n}{24} \quad \text{Divide each side by 24.}$$

$$75 = n$$

So, 18 is 75% of 24.

Example 2 What number is 60% of 150?

$$\frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100} \quad \text{Percent proportion}$$

Let a represent the part.

$$\frac{a}{150} = \frac{60}{100} \quad \text{Write the proportion.}$$

$$a \times 100 = 150 \times 60 \quad \text{Find the cross products.}$$

$$100a = 9,000 \quad \text{Simplify.}$$

$$\frac{100a}{100} = \frac{9,000}{100} \quad \text{Divide each side by 100.}$$

$$a = 90$$

So, 90 is 60% of 150.

Exercises

Find each number. Round to the nearest tenth if necessary.

1. What number is 25% of 20? **5**
2. What percent of 50 is 20? **40%**
3. 30 is 75% of what number? **40**
4. 40% of what number is 36? **90**
5. What number is 20% of 625? **125**
6. 12 is what percent of 30? **40%**