2-8 Solve a Percent Problem

3 types of problems

1. What number is 75% of 4 (is/part)
2. 3 is what percent of 4 (%)
3. 75% of what number is 3 (of/whole)

Proportion Method:

$$\frac{\text{(is) part}}{\text{(of) whole}} = \frac{\text{percent}}{100}$$

Percent - # with the percent sign (%)
Part – the number with the word is
Whole – the number with the word of

Steps:

1. Read the problem
2. Figure out what you know (part, whole, %)
3. Set up the proportion
4. Cross multiply
5. Divide by the left over number
6. Rewrite and circle your answer

Examples/Foldable:

PROPORTIONAL REASONING

can be used to solve problems involving percentages

$$\frac{\text{Part}}{\text{Whole}} = \frac{\%}{100}$$

EXAMPLE 1:

21 is what percent of 35?

$$\frac{21}{35} = \frac{x}{100}$$

$$35x = 21(100)$$

$$35x = 2100$$

$$x = 60$$

EXAMPLE 2:

28 is what percent of 50?

$$\frac{28}{50} = \frac{x}{100}$$

$$50x = 28(100)$$

$$50x = 2800$$

$$x = 56$$

EXAMPLE 3:

What is 12% of 175?

$$\frac{x}{175} = \frac{12}{100}$$

$$100x = 175(12)$$

$$100x = 2100$$

$$x = 21$$

EXAMPLE 4:

What is 90% of 130?

$$\frac{x}{130} = \frac{90}{100}$$

$$100x = 130(90)$$

$$100x = 11{,}700$$

$$x = 117$$

EXAMPLE 5:

9 is 45% of what number?

$$\frac{9}{x} = \frac{45}{100}$$

$$45x = 9(100)$$

$$45x = 900$$

$$x = 20$$

EXAMPLE 6:

91 is 70% of what number?

$$\frac{91}{x} = \frac{70}{100}$$

$$70x = 91(100)$$

$$70x = 9100$$

$$x = 130$$