

Chapter 7 Section 2 Basic Percent Problems.

Three types of percent problems.

1) Find a given percent of a given number.

Find 25% of 640

2) Find a percent given two numbers.

15 is what percent of 50?

3) Find a number that is a given percent of another number.

10% of what number is 12?

There are many ways to find the answers. The method that will be used is the equation model. If you solve these problems another way, go ahead.

First type:

Find a given percent of a given number.

Example 1: page 512

What number is 25% of 40?

$$x = 0.25(40)$$

$$x = 100$$

The number is 100

Translate the words to an equation. Use x for the number.

Is represents the equal sign. Of means multiplication.

Change to percent to a decimal.

Solve the equation.

Answer the question.

Try:

a) What number is 36% of 120?

b) What number is $8\frac{1}{3}\%$ of 120?

Second type:

Find a percent given two numbers

Example 4: Page 514

15 is what percent of 50?

$$15 = x(50)$$

$$x = 0.30$$

$$30\%$$

The percent is 30%

Remember, the problem ask for a percent.

Translate the words to an equation.

Solve the equation

Change to a percent

Answer the problem.

Try:

a) 10 is what percent of 80?

b) 14 is what percent of 25?

c) 10 is what percent of 200?

Third Type:

Find a number that is a given percent of another number.

Example 6: page 516.

10% of what number is 12?

$$0.10x = 12$$

$$x = 120$$

The number is 120

Translate the words to an equation.

Solve the equation.

answer the question.

Try:

a) 20% of what number is 45?

b) 27 is 90% of what number?