

Unit 24 Finding the Percent of Change

1. Finding the percent of change

A. The change proportion is used to find the percent of increase or percent of decrease.

The Change Proportion

$$\frac{\%}{100} = \frac{\text{Change}}{\text{Original Number}}$$

B. Example: What is the percent of increase from 16 to 20?

$$\frac{\%}{100} = \frac{\text{Change}}{\text{Original Number}}$$

$$\text{Change} = 20 - 16 = 4$$

$$\frac{x}{100} = \frac{4}{16}$$

$$16x = 400$$

$$x = 25\%$$

20 is 25% larger than 16.

C. Example: What is the percent of decrease from 20 to 16?

$$\frac{\%}{100} = \frac{\text{Change}}{\text{Original Number}}$$

$$\text{Change} = 20 - 16 = 4$$

$$\frac{x}{100} = \frac{4}{20}$$

$$20x = 400$$

$$x = 20\%$$

16 is 20% smaller than 20.

Note the new original number

2. Finding a result given a number and the percent of change.

A. Procedure:

1. Use the change proportion to find the amount of change.
2. Add or subtract the amount of change to determine the result.

B. Example: If 16 is increased by 25%, what is the result?

$$\frac{\%}{100} = \frac{\text{Change}}{\text{Original Number}}$$

$$\frac{25}{100} = \frac{x}{16}$$

$$(25)(16) = (100)(x)$$

$$400 = 100x$$

$$x = 4$$

The amount of change is 4.

The result is $16 + 4 = 20$.

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Finding 10% of a number simply requires moving the number's decimal point one place to the left. Finding 1% of a number simply requires moving the number's decimal point two places to the left.

10% of 110 is 11

1% of 110 is 1.1