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

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

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

$$Change = 20 - 16 = 4$$

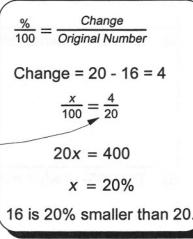
$$\frac{x}{100} = \frac{4}{16}$$

$$16x = 400$$

$$x = 25\%$$

$$20 \text{ is } 25\% \text{ larger than } 16.$$

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?

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

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

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

$$400 = 100x$$

$$x = 4$$
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