

Percent of Change: ratio that compares the change in quantity to the original amount

Difference in amounts: higher # - lower #

$$\frac{\text{change in amount}}{\text{original amount}} = \frac{\% \text{ of change}}{100}$$

first number

Percent of increase: going from lower to higher number (↑)

Percent of decrease: going from higher to lower number (↓)

Ex. 1 Find the percent of change, determine if it is an increase or a decrease.

Round to the nearest whole percent.

A) 10 yards to 13 yards

difference

$$\frac{\text{change}}{\text{original}} = \frac{p}{100}$$

first

$$\frac{13-10}{10} = \frac{p}{100}$$

$$\frac{3}{10} = \frac{p}{100}$$

$$100 \cdot 3 = 10p$$

$$\frac{300}{10} = \frac{10p}{10}$$

$$30 = p$$

$p = 30\% \uparrow$

B) \$20 to \$15

$$\frac{\text{change}}{\text{original}} = \frac{p}{100}$$

$$\frac{20-15}{20} = \frac{p}{100}$$

$$\frac{5}{20} = \frac{p}{100}$$

$$\frac{100}{4} = \frac{4p}{4}$$

$$25 = p$$

$p = 25\% \downarrow$

*answer will include value, percent symbol, and increase or decrease!

C) Jonas is saving for a video game that costs \$36. Last year the game cost \$28. What is the percent of change?

*Arrange the numbers in chronological order according to "time." Events that happen earlier are the original value.

Cost went from \$28 to \$36

$$\frac{36-28}{28} = \frac{p}{100}$$

$$\frac{8}{28} = \frac{p}{100}$$

$$\frac{200}{7} = \frac{7p}{7}$$

$$28.571428 = p$$

$p \approx 29\% \uparrow$

D) At the library, 349 books were checked out last month. This month 273 books were checked out. What is the percent of change?

Books checked out: from 349 to 273

$$\frac{349-273}{349} = \frac{p}{100}$$

$$\frac{76}{349} = \frac{p}{100}$$

$$\frac{7600}{349} = \frac{349p}{349}$$

$$21.7765 = p$$

$p \approx 22\% \downarrow$