

2-5 Percent of Change

Find the percent of change. Round to the nearest whole percent. State whether the percent of change is an *increase* or *decrease*.

19. \$240 to \$320

SOLUTION:

Find the amount of change.

$$320 - 240 = 80$$

Find the percent of change.

$$\begin{aligned}\text{percent of change} &= \frac{\text{amount of change}}{\text{original amount}} \\ &= \frac{80}{240} \\ &\approx 0.33 \\ &\approx 33\%\end{aligned}$$

The percent of change is about 33%. Since the amount of money increased, this is a percent of increase.

ANSWER:

33%; increase

21. The table shows the number of youth 7 years and older who played soccer from 2004 to 2012.

Playing Soccer	
Year	Number (millions)
2004	12.9
2006	13.7
2008	13.3
2010	14.0
2012	13.8

- a. Find the percent of change from 2008 to 2012. Round to the nearest tenth of a percent. Is it an increase or decrease?
- b. Find the percent of change from 2006 to 2008. Round to the nearest tenth of a percent. Is it an increase or decrease?

SOLUTION:

- a. Find the amount of change.

$$13.8 - 13.3 = 0.5$$

Find the percent of change.

$$\begin{aligned}\text{percent of change} &= \frac{\text{amount of change}}{\text{original amount}} \\ &= \frac{0.5}{13.3} \\ &\approx 0.038 \\ &\approx 3.8\%\end{aligned}$$

The percent of change is about 3.8%, or about 4%. Since the quantity is increased, this is a percent of increase.

- b. Find the amount of change.

$$13.7 - 13.3 = 0.4$$

Find the percent of change.

$$\begin{aligned}\text{percent of change} &= \frac{\text{amount of change}}{\text{original amount}} \\ &= \frac{0.4}{13.7} \\ &\approx 0.029 \\ &\approx 2.9\%\end{aligned}$$

The percent of change is about 2.9%. Since the quantity is decreased, this is a percent of decrease.

ANSWER:

a. about 3.8%; increase

b. about 2.9%; decrease