

Accelerated Math Notes Section 6-4 Percent of Change

A percent of change is a ratio that compares the change in quantity to the original amount.

$$\text{percent of change} = \frac{\text{amount of change}}{\text{original amount}}$$

In 1978 tuition for the year at a local college was \$3,400. Today it is \$34,000 per year. What is the percent increase in yearly tuition?

$$\frac{\text{percent increase}}{100} = \frac{\text{amount of increase}}{\text{original amount}}$$

$$\frac{\quad}{100} = \frac{34000 - 3400}{30600}$$

$$\frac{\text{inc}}{\text{original}} = \frac{30,600}{3400} = \frac{n}{100}$$

$$n = 900$$

900% increase

In 2000 the enrollment at Westview High was 2400 students. If the enrollment in 2013 is 2150 students, what is the percent decrease in enrollment? (Round to nearest tenth of a percent)

$$\frac{\text{percent decrease}}{100} = \frac{\text{amount of decrease}}{\text{original amount}}$$

$$\frac{\quad}{100} = \frac{2400 - 2150}{2400}$$

$$\frac{\text{amt decrease}}{\text{original}} = \frac{250}{2400} = \frac{n}{100}$$

$$n = 10.41\bar{6}$$

10.4% decrease

In 1965, when John entered college, the tuition was \$7500. In 2013 when his daughter went to the same school, the tuition was \$25,500. Find the percent of change.

$$\frac{\text{percent increase}}{100} = \frac{\text{amount of increase}}{\text{original amount}}$$

$$\frac{\quad}{100} = \frac{25500 - 7500}{18000}$$

$$\frac{\text{Amt increase}}{1965 \text{ tuition}} = \frac{n}{100} = \frac{18000}{7500}$$

$$n = 240$$

240% increase

In 1975 the average price per gallon of gasoline was \$0.57. In January 2013 the average price per gallon was \$3.69. Find the percent increase. (Round to nearest tenth of a percent)

$$\frac{\text{percent increase}}{100} = \frac{\text{amount of increase}}{\text{original amount}}$$

$$\frac{\quad}{100} = \frac{3.69 - 0.57}{0.57}$$

amt increase
1975 price

$$\frac{n}{100} = \frac{3.12}{0.57}$$

$$n = 547.368\dots$$

547.4% increase

The number of Mathcounts participants increased from 8 students to 15 students. Find the percent of increase of the members of the club.

amt of increase
original #

$$\frac{n}{100} = \frac{7}{8}$$

$$n = 87.5$$

87.5% increase

Megan bought stock for \$56 per share. She had to sell it for \$48 per share. What was her percent loss? (Round to nearest tenth of a %)

amt loss
buying price

$$\frac{n}{100} = \frac{8}{56}$$

$$n = 14.2857\dots$$

14.3% loss