

Name: Key

Class:

Topic:

Date:

Main Ideas/Questions

Notes

**PERCENT OF CHANGE**

A **percent of change** is the ratio of the amount of change to the original amount:

$$\boxed{\text{percent of change}} = \frac{\boxed{\text{bigger \# - smaller \#}}}{\boxed{\text{original amount}}} \times 100$$

**TYPES of Percent Change**

- » When the original amount goes up, it's called a percent increase.
- » When the original amount goes down, it's called a percent decrease.

**EXAMPLE** ↻

Beth bought a \$75 pair of jeans for \$60. Find the percent of change and classify as a percent increase or decrease.

$$\frac{75-60}{75} = \frac{15}{75} = 20\% \text{ decrease}$$

**YOU TRY!**

**Directions:** Find the percent of change and classify as a percent increase or decrease. Round to the nearest tenth of a percent when necessary.

1. John went from weighing 140 pounds to 155 pounds.

$$\frac{155-140}{140} = \frac{15}{140} = 10.7\% \text{ increase}$$

2. The computer that sold for \$815 last month sold for \$925 this month.

$$\frac{925-815}{815} = \frac{110}{815} = 13.5\% \text{ increase}$$

3. Last year, the debate team had 25 members. This year, the club has 18 members.

$$\frac{25-18}{25} = \frac{7}{25} = 28\% \text{ decrease}$$

4. Karen's old car got 25 miles per gallon. Her new car gets 31 miles per gallon.

$$\frac{31-25}{25} = \frac{6}{25} = 24\% \text{ increase}$$

5. Ian worked 25 hours at the grocery store last week and 36 hours this week.

$$\frac{36-25}{25} = \frac{11}{25} = 44\% \text{ increase}$$

6. The football team scored 128 total points last season. This year, they scored 144 total points.

$$\frac{144-128}{128} = \frac{16}{128} = 12.5\% \text{ increase}$$

7. The store employee changed an \$8.00 price sticker to \$2.50 and placed it on the sale shelf.

$$\frac{8-2.50}{8} = \frac{5.5}{8} = 68.8\% \text{ decrease}$$

8. The police officer gave a woman a ticket for driving 75 mph in a 55 mph speed zone.

$$\frac{75-55}{55} = \frac{20}{55} = 36.4\% \text{ Increase}$$

9. The total rainfall was 14.5 inches in 2014 and 8.90 inches in 2015.

$$\frac{14.5-8.9}{14.5} = \frac{5.6}{14.5} = 38.6\% \text{ decrease}$$

10. Rob took 75 minutes to finish his 6<sup>th</sup> grade math final exam and 1 hour and 40 minutes to finish his 7<sup>th</sup> grade math final exam.

$$\frac{100-75}{75} = \frac{25}{75} = 33.3\% \text{ increase}$$

11. In Mr. Wahlen's math class, Erin earned an 88 in the 1<sup>st</sup> quarter and a 94 in the 2<sup>nd</sup> quarter.

$$\frac{94-88}{88} = \frac{6}{88} = 6.8\% \text{ increase}$$

12. The enrollment at a university increased from 14,000 to 16,000 students.

$$\frac{16000-14000}{14000} = \frac{2000}{14000} = 14.3\% \text{ increase}$$

13. The florist sold 800 roses last year on Valentine's Day. This year, the sold 638 roses.

$$\frac{800-638}{800} = \frac{162}{800} = 20.3\% \text{ decrease}$$

14. The golf club paid \$40 for a certain golf club, then sold it for \$75.

$$\frac{75-40}{40} = \frac{35}{40} = 87.5\% \text{ increase}$$