

Lesson 7-6

Example 1 Find Percent of Increase

HEIGHT Find the percent of change in Sarah's height from last year to this year if she was 48 inches tall last year and is 51 inches tall this year.

Since Sarah's height this year is greater than her height last year, this is a percent of increase. The amount of increase is $51 - 48$ or 3 inches.

$$\begin{aligned}\text{percent of increase} &= \frac{\text{amount of increase}}{\text{original amount}} \\ &= \frac{3}{48} && \text{Substitution} \\ &= 0.0625 && \text{Simplify.} \\ &= 6.25\% && \text{Write 0.0625 as a percent.}\end{aligned}$$

The percent of increase in Sarah's height is 6.25%.

Example 2 Find Percent of Decrease

STOCKS Find the percent of change if the original price of a stock was \$36 and the new price is \$27. Round to the nearest whole percent if necessary.

Since the new price is less than the original price, this is a percent of decrease. The amount of decrease is $36 - 27$ or \$9.

$$\begin{aligned}\text{percent of decrease} &= \frac{\text{amount of decrease}}{\text{original amount}} \\ &= \frac{9}{36} && \text{Substitution} \\ &= 0.25 && \text{Simplify.} \\ &= 25\% && \text{Write 0.25 as a percent.}\end{aligned}$$

The percent of decrease in the stock price is 25%.

Example 3 Standardized Test Practice

The table shows about how many people attended the county fair for five consecutive years.

Year	Attendance (thousands)
2001	11.4
2002	12.8
2003	13.2
2004	12.2
2005	11.7

Which statement is supported by the information in the table?

- A The attendance in 2005 was about 6% less than the attendance in 2004.
- B The greatest increase in attendance occurred from 2002 to 2003.
- C The attendance in 2002 was about 12% greater than the attendance in 2001.
- D The greatest decrease in attendance occurred from 2004 to 2005.

Read the Test Item

You need to determine which statement is best supported by the information in the table.

Solve the Test Item

Check A. The percent of change from 2004 to 2005 was $\frac{11.7 - 12.2}{12.2}$ or about -4% , not -6% .

Check B. From 2002 to 2003, the increase was $13.2 - 12.8$ or 0.4 .
From 2001 to 2002, the increase was $12.8 - 11.4$ or 1.4
This statement is not supported by the information.

Check C. The percent of change from 2001 to 2002 was $\frac{12.8 - 11.4}{11.4}$ or about 12% . This statement is supported by the information.

Check D. From 2003 to 2004, the decrease was $13.2 - 12.2$ or 1.0 .
From 2004 to 2005, the decrease was $12.2 - 11.7$ or 0.5 .
This statement is not supported by the information.

The solution is C.