7-6 Study Guide and Intervention

Percent of Change

HW 4

> A **percent of change** is a ratio that compares the change in quantity to the original amount. If the original quantity is increased, it is a **percent of increase**. If the original quantity is decreased, it is a **percent of decrease**.

Example 1 Last year, 2,376 people attended the rodeo. This year, attendance was 2,950. What was the percent of change in attendance to the nearest whole percent?

Since this year's attendance is greater than last year's attendance, this is a percent of increase.

The amount of increase is 2,950 − 2,376 or 574.

percent of increase = $\dfrac{\text{amount of increase}}{\text{original amount}}$ ← new amount − original amount

$= \dfrac{574}{2,376}$　　　Substitution

≈ 0.24 or 24%　　Simplify.

Rodeo attendance increased by about 24%.

Example 2 John's grade on the first math exam was 94. His grade on the second math exam was 86. What was the percent of change in John's grade to the nearest whole percent?

Since the second grade is less than the first grade, this is a percent of decrease. The amount of decrease is 94 − 86 or 8.

percent of decrease = $\dfrac{\text{amount of decrease}}{\text{original amount}}$ ← original amount − new amount

$= \dfrac{8}{94}$　　　Substitution

≈ 0.09 or 9%　　Simplify.

John's math grade decreased by about 9%.

Exercises

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

1. original: 4
   new: 5

2. original: 1.0
   new: 1.3

3. original: 15
   new: 12

4. original: $30
   new: $18

5. original: 60
   new: 63

6. original: 160
   new: 136

7. original: 7.7
   new: 10.5

8. original: 9.6
   new: 5.9