

**Study Guide and Intervention****Percents and Decimals**

To write a percent as a decimal, first rewrite the percent as a fraction with a denominator of 100. Then write the fraction as a decimal.

**EXAMPLE 1** Write 23% as a decimal.

$$23\% = \frac{23}{100}$$

$$= 0.23$$

Rewrite the percent as a fraction with a denominator of 100.

Write the fraction as a decimal.

**EXAMPLE 2** Write 127% as a decimal.

$$127\% = \frac{127}{100}$$

$$= 1.27$$

Rewrite the percent as a fraction with a denominator of 100.

Write the fraction as a decimal.

**EXAMPLE 3** Write 0.8% as a decimal.

$$0.8\% = \frac{0.8}{100}$$

Rewrite the percent as a fraction with a denominator of 100.

$$= \frac{0.8}{100} \times \frac{10}{10}$$

Multiply by  $\frac{10}{10}$  to eliminate the decimal in the numerator.

$$= \frac{8}{1,000} \text{ or } 0.008$$

Write the fraction as a decimal.

To write a decimal as a percent, first write the decimal as a fraction with a denominator of 100. Then write the fraction as a percent.

**EXAMPLE 4** Write 0.441 as a percent.

$$0.441 = \frac{441}{1,000}$$

Write the decimal as a fraction.

$$= \frac{441 \div 10}{1,000 \div 10}$$

Divide by 10 to get a denominator of 100.

$$= \frac{44.1}{100} \text{ or } 44.1\%$$

Write the fraction as a percent.

**EXERCISES**

Write each percent as a decimal.

1. 39%

2. 57%

3. 82%

4. 135%

5. 112%

6. 0.4%

Write each decimal as a percent.

7. 0.86

8. 0.36

9. 0.65

10. 0.2

11. 0.148

12. 0.217

**Practice: Word Problems****Percents and Decimals**

<p>1. <b>COMMUTING</b> According to the 2000 U.S. census, 76% of U.S. workers commute to work by driving alone. Write 76% as a decimal.</p>	<p>2. <b>BASEBALL</b> Barry Bonds's batting average for the 2002 season was 0.370. Write 0.370 as a percent.</p>
<p>3. <b>ELECTIONS</b> In the 2002 U.S. midterm elections, 39% of eligible adults voted. What is 39% written as a decimal?</p>	<p>4. <b>BASKETBALL</b> In the 2001–2002 season, Jason Kidd of the New Jersey Nets had a field goal average of 0.391. What is 0.391 written as a percent?</p>
<p>5. <b>SPORTS</b> When asked to choose their favorite sport, 27% of U.S. adults who follow sports selected professional football. What decimal is equivalent to 27%?</p>	<p>6. <b>AGE</b> Lawrence is 18 years old and his brother Luther is 12 years old. This means that Lawrence is 1.5 times older than Luther. What percent is equivalent to 1.5?</p>
<p>7. <b>WATER</b> About 5% of the surface area of the U.S. is water. What decimal represents the amount of the U.S. surface area taken up by water?</p>	<p>8. <b>POPULATION</b> China accounts for 0.207 of the world's population. What percent of the world's population lives in China?</p>