

4-5**Study Guide and Intervention****Fractions and Decimals**

To write a decimal as a fraction, divide the numerator of the fraction by the denominator. Use a power of ten to change a decimal to a fraction.

Example 1 Write $\frac{5}{9}$ as a decimal.

Method 1 Use pencil and paper.

$$\begin{array}{r} 0.555\dots \\ 9 \overline{)5.000} \end{array}$$

$$\underline{45}$$

$$50$$

$$\underline{45}$$

$$50$$

$$\underline{45}$$

$$5$$

The remainder after each step is 5.

Method 2 Use a calculator.

$$5 \quad 9 \quad \boxed{=} \quad 0.55555556$$

You can use bar notation $0.\overline{5}$ to indicate that 5 repeats forever. So, $\frac{5}{9} = 0.\overline{5}$.

Example 2 Write 0.32 as a fraction in simplest form.

$$0.32 = \frac{32}{100}$$

The 2 is in the hundredths place.

$$= \frac{8}{25}$$

Simplify.

Exercises

Write each fraction or mixed number as a decimal. Use bar notation if the decimal is a repeating decimal.

1. $\frac{8}{10}$ **0.8**

2. $\frac{3}{5}$ **0.6**

3. $\frac{7}{11}$ **$0.\overline{63}$**

4. $4\frac{7}{8}$ **4.875**

5. $\frac{13}{15}$ **$0.8\overline{6}$**

6. $3\frac{47}{99}$ **$3.4\overline{7}$**

Write each decimal as a fraction in simplest form.

7. 0.14 $\frac{7}{50}$

8. 0.3 $\frac{3}{10}$

9. 0.94 $\frac{47}{50}$