

# 3.9

## Expressing Fractions as Decimals

### GOAL

Use division to express fractions as decimals.

1. Write each decimal as a fraction.

a)  $0.3 =$  \_\_\_\_\_ c)  $0.145 =$  \_\_\_\_\_

b)  $0.36 =$  \_\_\_\_\_ d)  $0.116 =$  \_\_\_\_\_

You can use a calculator to complete these questions.

2. Write each fraction as a decimal.

a)  $\frac{3}{10} =$  \_\_\_\_\_ c)  $\frac{5}{8} =$  \_\_\_\_\_

b)  $\frac{1}{4} =$  \_\_\_\_\_ d)  $\frac{2}{5} =$  \_\_\_\_\_

3. Write each fraction as a repeating decimal. Write only the first two repeating sets of digits.

a)  $\frac{5}{6} =$  \_\_\_\_\_ c)  $\frac{1}{9} =$  \_\_\_\_\_

b)  $\frac{8}{9} =$  \_\_\_\_\_ d)  $\frac{1}{3} =$  \_\_\_\_\_

4. Write each fraction as a terminating decimal.

a)  $\frac{9}{20} =$  \_\_\_\_\_ c)  $\frac{3}{8} =$  \_\_\_\_\_

b)  $\frac{1}{5} =$  \_\_\_\_\_ d)  $\frac{7}{10} =$  \_\_\_\_\_

5. Order each set of fractions from least to greatest.

a)  $\frac{2}{10}, \frac{1}{7}, \frac{5}{8}, \frac{7}{10}, \frac{4}{7}$  \_\_\_\_\_

b)  $\frac{7}{13}, \frac{6}{10}, \frac{1}{3}, \frac{1}{4}, \frac{55}{100}$  \_\_\_\_\_

c)  $\frac{1}{3}, \frac{2}{9}, \frac{1}{2}, \frac{5}{6}, \frac{2}{3}$  \_\_\_\_\_

### At-Home Help

A **repeating decimal** has a block of one or more digits that repeats in a pattern.

For example,  $0.44444\dots$  and  $0.134134134\dots$

A **terminating decimal** is complete after a certain number of digits.

For example,  $0.777$  or  $0.13485$ . All terminating decimals can be written over a multiple of

10, such as  $\frac{\square}{10}$ ,  $\frac{\square}{100}$ , or  $\frac{\square}{1000}$ .

To convert a fraction to a decimal, divide the numerator by the denominator.

For example,  $\frac{3}{4} = 3 \div 4 = 0.75$ .

*(hint: convert to decimal form!)*

Name \_\_\_\_\_

Skill: Changing Fractions and Mixed Numbers to Decimals

Change the following fractions or mixed numbers to decimals.

1.  $\frac{1}{4} =$

2.  $\frac{2}{5} =$

3.  $\frac{49}{50} =$

4.  $\frac{17}{10} =$

5.  $\frac{1}{5} =$

6.  $\frac{7}{50} =$

7.  $\frac{2}{10} =$

8.  $\frac{31}{50} =$

9.  $\frac{13}{50} =$

10.  $\frac{9}{10} =$

11.  $\frac{3}{5} =$

12.  $\frac{3}{4} =$

13.  $\frac{7}{20} =$

14.  $\frac{7}{25} =$

15.  $\frac{3}{10} =$

16.  $1\frac{2}{5} =$

17.  $3\frac{31}{50} =$

18.  $1\frac{43}{50} =$

19.  $4\frac{4}{25} =$

20.  $4\frac{4}{8} =$

21.  $5\frac{1}{5} =$

22.  $4\frac{1}{4} =$

23.  $2\frac{8}{32} =$

Total Problems 23 Problems Correct