

Writing Decimals as Fractions

MAIN IDEA

- Write decimals as fractions or mixed numbers in simplest form.

BUILD YOUR VOCABULARY (pages 86–87)

Any number that can be written as a is a **rational number**.

KEY CONCEPT

Write Decimals as Fractions To write a decimal as a fraction, you can follow these steps.

- Identify the place value of the last decimal place.
- Write the decimal as a fraction using the place value as the denominator. If necessary, simplify the fraction.

EXAMPLES Write Decimals as Fractions

Write each decimal as a fraction in simplest form.

1 0.4

The place-value chart shows that the place value of the last decimal place is

Place-Value Chart

1,000	100	10	1	0.1	0.01	0.001	0.0001
thousands	hundreds	tens	ones	tenths	hundredths	thousandths	ten-thousandths
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

. So, 0.4 means .

$$0.4 = \frac{\quad}{\quad}$$

Say *four tenths*.

$$= \frac{\quad}{\quad}$$

Simplify. Divide the numerator and denominator by the GCF, .

1 0.38

$$0.38 = \frac{\quad}{\quad}$$

Say *thirty-eight hundredths*.

$$= \frac{\quad}{\quad}$$

Simplify. Divide by the GCF, .

Place-Value Chart

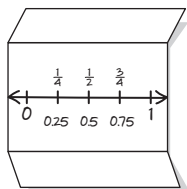
1,000	100	10	1	0.1	0.01	0.001	0.0001
thousands	hundreds	tens	ones	tenths	hundredths	thousandths	ten-thousandths
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

3 0.264

FOLDABLES

ORGANIZE IT

Use the space under the Decimals tab of your Foldable to summarize how to write a decimal as a fraction.



Place-Value Chart

1,000	100	10	1	0.1	0.01	0.001	0.0001
thousands	hundreds	tens	ones	tenths	hundredths	thousandths	ten-thousandths
0	0	0	0	2	6	4	0

$$0.264 = \boxed{}$$

Say *two hundred sixty-four*

$$= \boxed{}$$

Simplify. Divide by the GCF, .

EXAMPLE Write Decimals as Mixed Numbers

4 **RAINFALL** In 1955, Hurricane Diane moved through New England and produced one of the region's heaviest rainfalls in history. In a 24-hour period, 18.15 inches of rain were recorded in one area. Express this amount as a mixed number in simplest form.

$$18.15 = 18 \frac{15}{\boxed{}}$$

Say *eighteen and fifteen hundredths*.

$$= 18 \frac{\boxed{}}{\boxed{}}$$

Simplify.

REMEMBER IT



In a decimal, the digits to the left of the decimal point represent whole numbers. The digits to the right of the decimal point represent fractions.

Check Your Progress

Write each decimal as a fraction in simplest form.

a. 0.8

b. 0.64

c. 0.824

d. 23.56

HOMEWORK ASSIGNMENT

Page(s):

Exercises: