

NAME \_\_\_\_\_

**Module 4** Fractions, Decimals, Percents, and Factors  
**Lesson 2** Concepts of Decimal Place Value and Fraction and Percent Equivalents

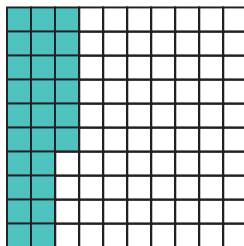
### Lesson Objectives

- Develop understanding of *decimal place value* using models.
- Identify decimal and percent equivalents for benchmark fractions.
- Identify decimal and percent equivalents for *proper fractions* and explain why they represent the same value.
- Identify decimal and percent equivalents for *mixed numbers* and explain why they represent the same value.

### Subtopic 1 Decimal Place Value and Fraction Equivalents

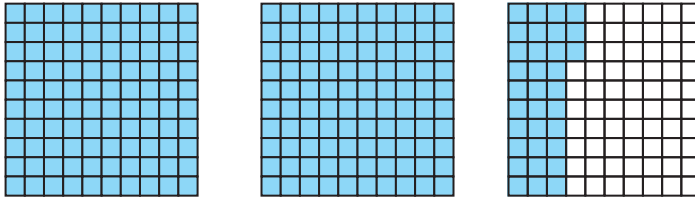
- A **decimal** is a number with a decimal point in it.
- The **decimal point** separates the integer part from the decimal part.
- The value of the decimal part is **less than one**.
- The first decimal place after the decimal point shows **tenths**.
- The second decimal place after the decimal point shows **hundredths**.
- A **mixed number** is an integer and a fraction.

**1** Name the decimal shown by the shaded region.



0.26

- 2 Name the decimal and fraction shown by the shaded region.



$$2.33 \quad 2\frac{33}{100}$$

### Subtopic 2 Changing Decimals to Fractions and Fractions to Decimals

When two numbers represent the same quantity, the numbers are equivalent.

- 3 Find the decimal equivalent of  $\frac{3}{4}$ .

$$\frac{3}{4} = \frac{75}{100} = 0.75$$

- 4 Find the decimal equivalent of  $\frac{1}{5}$ .

$$\frac{1}{5} = \frac{2}{10} = 0.2$$

### Subtopic 3: Changing a Fraction to a Percent

Percent means "per 100."

- 5 Find the percent equivalent of  $\frac{57}{100}$ .

$$\frac{57}{100} = 57\%$$

NAME \_\_\_\_\_

**Module 4**    **Fractions, Decimals, Percents, and Factors**  
**Lesson 2**    **Concepts of Decimal Place Value and Fraction**  
                  **and Percent Equivalents**

 6 Find the percent equivalent of  $\frac{3}{4}$ .

$$\frac{3}{4} = \frac{75}{100} = 75\%$$

 7 Find the percent equivalent of  $\frac{4}{5}$ .

$$\frac{4}{5} = \frac{8}{10} = \frac{80}{100} = 80\%$$

**Subtopic 4**    **Benchmark Fractions and Fraction Equivalents**

- Benchmark equivalents:

$$\frac{1}{4} = 0.25 = \underline{25\%} \quad \frac{3}{4} = \underline{0.75} = 75\% \quad \frac{1}{2} = 0.5 = 50\%$$

- Every fraction can be expressed as an equivalent decimal and an equivalent percent because they represent the same quantity.

 8 Give the fraction and percent equivalents of 0.6.

$$\frac{6}{10} = \frac{60}{100} = 60\%$$

 9 Give the fraction and decimal equivalents of 40%.

$$\frac{40}{100} = \frac{4}{10} = .40 = .4$$

