



# Lesson Notes

## 7.3

NAME \_\_\_\_\_

Module 7 Ratio, Proportion, and Percent  
Lesson 3 Decimal and Percent Equivalents

### Lesson Objectives

- Convert proper fractions to decimals and percents.
- Convert mixed numbers and improper fractions to decimals and percents.

### Subtopic 1 Decimal and Percent Equivalents for Proper Fractions

Proper Fraction

- Numerator is less than **denominator**.
- Value is less than **one** whole unit.
- Has a **decimal** and **percent** equivalent.

To change a fraction to a decimal, **divide** the denominator into the numerator.

When a larger number divides a **smaller** number, the quotient has a decimal value less than 1.

Find the decimal equivalent.

- Place the **decimal point** in the quotient directly above the decimal point in the dividend.
- Divide as with **whole** numbers.

The decimal points are **two** places apart in a decimal and its equivalent percent.

Find the decimal and percent equivalents.

**1**  $\frac{1}{20}$

$$\begin{array}{r} 0.05 \\ 20 \overline{)1.00} \\ \underline{0} \\ 10 \\ \underline{10} \\ 0 \\ 100 \\ \underline{100} \\ 0 \end{array}$$

Decimal: 0.05  
Percent: 5%

**2**  $\frac{7}{50}$

$$\begin{array}{r} 0.14 \\ 50 \overline{)7.00} \\ \underline{0} \\ 70 \\ \underline{50} \\ 200 \\ \underline{200} \\ 0 \end{array}$$

Decimal: 0.14  
Percent: 14%

**Subtopic 2****Decimal and Percent Equivalents for Repeating Decimals**

A repeating decimal is a decimal in which a pattern of one or more digits is repeated indefinitely.

Find the decimal and percent equivalents.



$$\frac{2}{3}$$

$$\frac{2}{3} = 3 \overline{)2.00}$$

$$\frac{2}{3} = 0.666\dots = 0.\overline{6}$$

**Decimal:**  $0.\overline{6}$

**Percent:**  $66\frac{2}{3}\%$



$$\frac{7}{11}$$

$$\begin{array}{r} 0.63 \\ 11 \overline{)7.00} \\ \underline{0} \\ 70 \\ \underline{66} \\ 40 \\ \underline{33} \\ 7 \end{array}$$

**Decimal:**  $0.636363\dots = 0.\overline{63}$

**Percent:**  $63.6363\dots = 63\frac{7}{11}\%$

**Subtopic 3****Decimal and Percent Equivalents of Mixed Numbers**

Find the decimal and percent equivalents of  $5\frac{3}{4}$ .

$$5 + 0.75$$

**Decimal:**  $5.75$

**Percent:**  $575\%$