# Section 4.R.2 Introduction to Decimal Numbers

Go to Section 4.R.2 Learn mode in Hawkes to follow along!

## Reading and Writing Decimal Numbers

### To Read or Write a Decimal Number

1. Read (or write) the _____
2. Read (or write) the word _____
3. Read (or write) the fraction part as a _____ _____

**Example 1 Reading and Writing Decimal Numbers**

Write the mixed number $48\frac{6}{10}$ in decimal notation and in words.

**Solution**

## Exercises

Write each mixed number in decimal notation.

**1.** $6\frac{5}{10}$

**2.** $37\frac{498}{1000}$

Write each decimal number in words.

**3.** 0.9

**4.** 96.3

**5.** 19.102

**6.** 500.005

Write each number in decimal notation.

**7.** seventeen and nine tenths

**8.** fourteen and ninety-seven thousandths

# Comparing Decimal Numbers

## To Compare Two Positive Decimal Numbers

1. Moving **left to right**, compare digits with the _____
   _____
2. When one compared digit is _____

## To Compare Two Negative Decimal Numbers

1. Moving **left to right**, compare digits with the _____
   _____
2. When one compared digit is _____

### Example 5 Comparing Positive Decimal Numbers

Which number is larger: 0.08 or 0.085?

**Solution**

## Exercises

For each pair of decimal numbers, determine which number is larger.

**9.** 0.26, 0.27

**10.** 0.01, 0.009

Arrange each set of decimal numbers in order from smallest to largest. Then graph the numbers on a number line.

**11.** 0.3, 0.03, 0.33

**12.** 1.8, 1.75, 1.86

# Rounding Decimal Numbers

## Rounding Rule for Decimal Numbers

**1.** Look at the single digit one place value to the right of the digit in the place of desired accuracy.

**a.** **If this digit is less than 5,** _____ and replace all digits to the _____All digits to the _____

**b.** **If this digit is 5 or greater,** _____ and replace all digits to the _____ All digits to the _____

_____

**2.** Zeros to the right of the place of accuracy that are also to the right of the _____

_____

In this way, the place of accuracy is _____

If a rounded number has a 0 in the desiredplace of accuracy, then _____

### Example 7 Rounding Decimal Numbers

Round 18.649 to the nearest tenth.

**Solution**

## Exercises

Fill in the blanks to correctly complete each statement.

**13.** Round 34.78 to the nearest tenth.

**a.** The digit in the tenths position is ___.

**b.** The next digit to the right is ___.

**c.** Since ___ is greater than 5, change ___ to ___ and replace ___ with 0.

**d.** So 34.78 rounds to _____ to the nearest tenth.

Round each decimal number to the nearest hundredth.

**14.** 1.677

**15.** 19.444

**16.** 0.0764

**17.** 0.0439