

Cross-References

Fractions and Decimals

Student Workbook pages 8–11

Key Objectives

The student will:

- compare and/or order improper fractions, mixed numbers, and decimals to thousandths.

Key Terms

numerator, denominator, lowest common denominator, decimal equivalent, proper fraction, improper fraction

Prerequisite Skills

- Read and write numbers to any number of decimal places.
- Demonstrate and describe equivalent mixed numbers and improper fractions concretely, pictorially, and symbolically.
- Recognize and illustrate that all fractions and mixed numbers can be represented in decimal form (including terminating and repeating decimals).

Lesson Description

In this lesson, students use various strategies to compare and order numbers that involve wholes and parts.

In the **Introduction**, students compare stock prices offered by five different brokers. First, they classify the prices according to whether they are improper fractions, mixed numbers, or decimals. Then they convert the fractions to decimal form to find the best price. In the **Summary**, students use the decimals to order all five prices from least to greatest.

The **Tutorial** uses examples to establish these rules for comparing fractions:

- When two fractions have the same denominator, the one with the larger numerator is greater because there are more parts.
- When two fractions have the same numerator, the one with the smaller denominator is larger because the parts are larger.
- When two fractions cannot be compared directly, you can convert each fraction to decimal form.

There are three types of **Examples**. In the first type, students learn to compare fractions by expressing them with a common denominator. In the next, benchmarks are used to order numbers along a number line. Students also organize a series of decimals between 3 and 4, focusing on the order in which digits should be compared. In the final **Example**, students identify the numerator that completes an inequality of the form $a < \frac{\blacksquare}{b} < c$.

Which is greater, $\frac{3}{7}$ or $\frac{4}{7}$?

Complete the sentence by dragging the correct word to each space.

numerator denominator

When two fractions have the same , the fraction with the greater is greater than the other fraction.

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