

## Packet 1: Fraction Concepts

Dear Parents/Guardians,

Fractions: Packet 1 is a review of fraction concepts. In Lesson 1, students use diagrams to represent fractional parts, show equivalent fractions, and compare and order fractions. Students transition to non-visual sense-making strategies, which are highlighted below. In Lesson 2, students solve problems involving mixed numbers and improper fractions and practice converting between the two representations. In Lesson 3, students use pictures and the "big 1" to show equivalence and find common denominators.

### Strategies for Comparing and Ordering Fractions

Students have the opportunity to compare and order fractions using different strategies.

Strategy	Explanation	Example (Least to Greatest)
Unit Fractions	A unit fraction is a fraction that has a 1 as its numerator. If all fractions are unit fractions, the greater the denominator, the smaller the parts that make the whole (1).	$\frac{1}{5}, \frac{1}{2}, \frac{1}{10} \rightarrow \frac{1}{10}, \frac{1}{5}, \frac{1}{2}$ Using fraction strips, students compare and order unit fractions.
Common Numerators	Similar to the unit fraction strategy. If the numerators are the same, compare the size of the parts (denominators).	$\frac{2}{3}, \frac{2}{9}, \frac{2}{7} \rightarrow \frac{2}{9}, \frac{2}{7}, \frac{2}{3}$ Using fraction strips, students compare and order fractions with a common numerator.
Common Denominators	If the denominators are the same, then the number of parts in 1 whole are the same size. The greater the numerator, the greater the fraction.	$\frac{4}{6}, \frac{2}{6}, \frac{5}{6} \rightarrow \frac{2}{6}, \frac{4}{6}, \frac{5}{6}$ In Lesson 3.3, students use the "big 1" to find common denominators and rename fractions.
Benchmark Fractions	These are fractions that are easily recognizable in different forms.	$\frac{1}{8}, \frac{4}{5}, \frac{3}{6} \rightarrow \frac{1}{8}, \frac{3}{6}, \frac{4}{5}$ In this example, $\frac{1}{8}$ is close to 0, $\frac{3}{6}$ is one-half, and $\frac{4}{5}$ is close to 1.

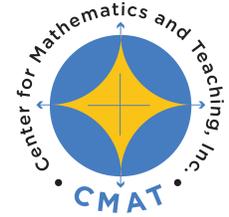
### Renaming Fractions Using the "big 1"

The multiplication property of 1 states that any number multiplied by 1 remain the same, or  $a \times 1 = a$ , for any number  $a$ .

Students use this property to rename fractions and find equivalent fractions with common denominators.

$$\frac{1}{2} \cdot \frac{4}{4} = \frac{4}{8}$$

In this equation,  $\frac{4}{4}$  is the same as 1, which we refer to as "the big 1."



## FRACTIONS PACKET 1

**By the end of the packet, your student should know...**

- How to represent fractions using different representations  
Lessons 1.1, 1.2, and 1.3
- How to convert mixed numbers to improper fractions (and vice versa)  
Lesson 1.2
- How to compare and order fractions using diagrams, the multiplication property of 1 (the "big 1"), and common denominators  
Lessons 1.2 and 1.3

### Additional Resources

- For definitions and additional notes please refer to section 1.5.
- For additional information on strategies for comparing and ordering fractions:  
[http://youtu.be/k9NIK8AXj\\_E](http://youtu.be/k9NIK8AXj_E)