
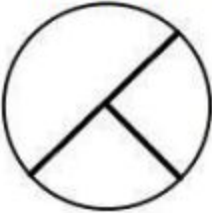

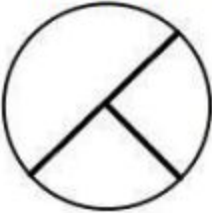

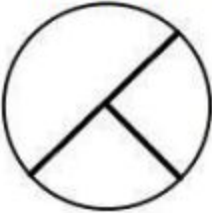


## Grade 3 Unit 3 Family Resource

### Unit Name: Developing a Conceptual Understanding of Fractions as Numbers

What's my child learning in Unit 3?	What does this mean? What does it look like?	How can I help my child at home?				
<p>Students will partition shapes into parts with equal areas and express the area of each part as a unit fraction of the whole (region models).</p>	<p>This figure was partitioned/divided into four equal parts. Each part is <math>\frac{1}{4}</math> of the total area of the figure. Given a shape, students partition it into equal parts, recognizing that these parts all have the same area. They identify the fractional name of each part and are able to partition a shape into parts with equal areas in several different ways.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><math>\frac{1}{4}</math></td> <td style="text-align: center;"><math>\frac{1}{4}</math></td> <td style="text-align: center;"><math>\frac{1}{4}</math></td> <td style="text-align: center;"><math>\frac{1}{4}</math></td> </tr> </table>	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	<p><a href="#">Fraction Fruit Slice</a> - A web game specifically targeting a choice of equal parts, unit fractions, or simple fractions depending on students' needs.</p>
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$			
<p>Students will understand a fraction as a number and that a unit fraction is one part of a whole that is partitioned into (denominators of 2, 3, 4, 6, 8) parts using only bar models and number lines.</p>	<p>Some important concepts related to developing understanding of fractions include:</p> <ul style="list-style-type: none"> <li>• <b>Understand fractional parts must be equal-sized</b> <table style="margin-left: 40px; margin-top: 10px;"> <tr> <td style="text-align: center; padding-right: 20px;">Example</td> <td style="text-align: center;">Non-example</td> </tr> <tr> <td style="text-align: center;"></td> <td style="text-align: center;"></td> </tr> </table> </li> </ul> <ul style="list-style-type: none"> <li>• The number of equal parts tell how many make a whole.</li> <li>• As the number of equal pieces in the whole increases, the size of the fractional pieces decreases. The size of the fractional part is relative to the whole.             <ul style="list-style-type: none"> <li>○ The number of children in one-half of a classroom is different than the number of children in one-half of a school. (the whole in each set is different therefore the half in each set will be different)</li> </ul> </li> </ul>	Example	Non-example			<p><a href="#">Fraction Frenzy</a> - A website game where students create an area model to represent a fraction.</p>
Example	Non-example					
						

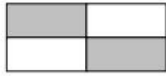
- When a whole is cut into equal parts, the denominator represents the number of equal parts.
- The numerator of a fraction is the count of the number of equal parts.
  - o  $\frac{3}{4}$  means that there are 3 one-fourths.
  - o Students can count one fourth, two fourths, three fourths.

Students express fractions as —fair sharing, parts of a whole, and parts of a set. They use various contexts (candy bars, fruit, and cakes) and a variety of models (circles, squares, rectangles, fraction bars, and number lines) to develop understanding of fractions and represent fractions. Students need many opportunities to solve word problems that require fair sharing.

To develop understanding of fair shares, students first participate in situations where the number of objects is greater than the number of children and then progress into situations where the number of objects is less than the number of children.

Examples: (Area or Region Model)

- Four children share six brownies so that each child receives a fair share. How many brownies will each child receive?
- Six children share four brownies so that each child receives a fair share. What portion of each brownie will each child receive?
- What fraction of the rectangle is shaded? How might you draw the rectangle in another way but with the same fraction shaded?



Solution:  $\frac{2}{4}$  or  $\frac{1}{2}$

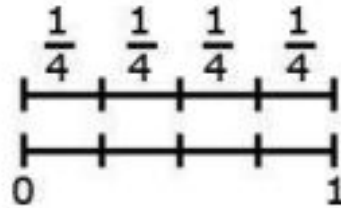
What fraction does the letter **a** represent? (Linear Model) Explain your thinking.



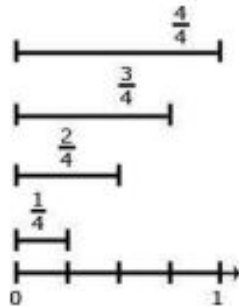
Students will represent a unit fraction on a number line diagram by partitioning the number line between 0-1 into equal parts recognizing the total number of equal parts (2, 3, 4, 6 & 8).

Students transfer their understanding of parts of a whole to partition a number line into equal parts. There are two new concepts addressed in this standard which students should have time to develop.

1. On a number line from 0 to 1, students can partition (divide) it into equal parts and recognize that each segmented part represents the same length.



2. Students label each fractional part based on how far it is from zero to the endpoint.



[Find Grampy](#) - A web game using a number line to estimate the numerator with a given denominator.

[Basic Number Line with Fractions](#) - A web activity where students represent a given fraction using a number line.

[Traveling Animals on a Number Line](#) - A website activity that has students estimating fractions on a number line.