Third Grade Math Parent Letter - Module 5: Fractions as Numbers on the Number Line

In this module, students build on their knowledge of fractions as equal partitions of a whole. Their knowledge becomes more formal as they work with area models and the number line.

Students begin by using concrete models such as filling cups with liquid or using a ruler to measure an item and partition (divide) the item into equal parts of a whole. They also identify the unit fraction. A unit fraction is always one of the fractional unit (e.g., 1/4, 1/6, 1/8). Students also learn about non-unit fractions. A non-unit fraction is a fraction with the numerator other than 1 (e.g., 2/4, 4/6, 5/8). In addition, students also work with various fractional shapes and identify which fraction matches the shape.

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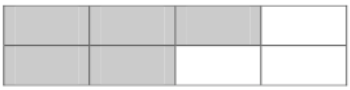

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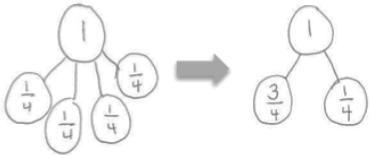
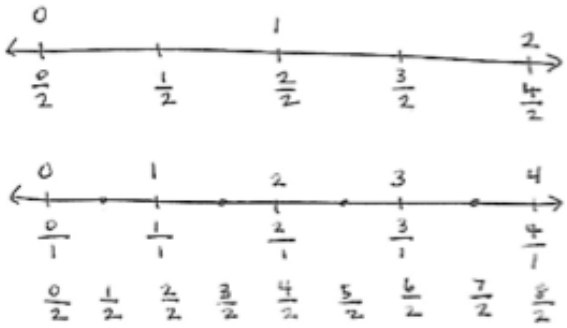
As the module continues, students get a better understanding of what each part of a fraction represents. They then learn about how non-unit fractions will build a whole when put together.



Moving on, students start to compare unit fractions, coming to discover that the larger the denominator, the smaller the fractional part. Students also learn that when the same whole is divided into more equal parts, each part is smaller.

Students then begin using the number line to show their knowledge of fractions. They begin by using the interval from 0 to 1 as the whole. Continuing beyond the first interval, they partition, place, count, and compare fractions on the number line. They notice that some fractions with different units are placed at the exact same point on the number line, and therefore are equal. For example, 1/2, 2/4, 3/6, and 4/8 are equivalent fractions. Students recognize that whole numbers can be written as fractions, as exemplified on the number lines below.



At the end of the module, students compare fractions that have the same numerator. As they compare fractions by reasoning about their size, students understand that fractions with the same numerator and a larger denominator are actually smaller pieces of the whole.