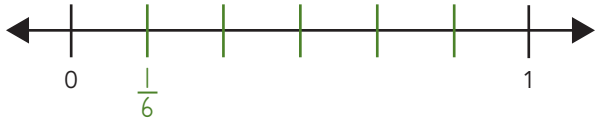
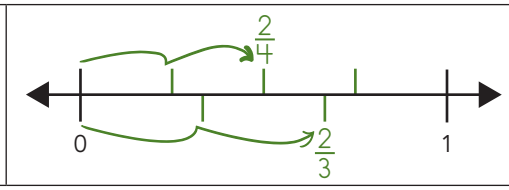
Bridges in Mathematics
Grade 3 Unit 4

Measurement & Fractions

In this unit your child will:

- Tell time and calculate elapsed time
- Measure mass and volume to solve problems
- Model and compare fractions in different ways

Your child will learn and practice these skills by solving problems like those shown below. Use the free Math Vocabulary Cards app for additional support: mathlearningcenter.org/apps

PROBLEM	COMMENTS
Jocelyn ate a peach with a mass of 167 grams. Then she ate 189 grams of almonds. What was the total mass of Jocelyn's snack? 167 + 189 100 + 100 = 200 60 + 80 = 140 7 + 9 = 16 356 grams	Students add and subtract with multi-digit numbers in this unit. Many of the problems involve units of metric measurement (grams, centimeters, and so on). This connects the computation with the measuring students are doing in class, and it helps students develop a sense for how these units of measurement relate to objects and quantities in the world around them.
Complete the missing information below by writing in the fraction number or sketching the given fraction on a number line. $\frac{1}{6}$  	Students have explored fractions as part of a whole in past grade levels. For example, they might have divided a square or a hexagon into equal parts and then shaded some of those parts to show a particular fraction. In this unit, students consider fractions as points on a number line. In this example, students divide the distance from 0 to 1 into 6 equal parts. The first of those sections, or the point that marks the end of that section, represents $\frac{1}{6}$.
Use a < (less than), > (greater than) or = (equal) symbol to compare the following fraction pairs. Show your thinking by placing the fractions on the number line. $\frac{2}{4} < \frac{2}{3}$  	Students use the number line to represent and compare fractions. In this case, $\frac{2}{4}$ is marked on top of the line, and $\frac{2}{3}$ is marked on the bottom of the line. Students can see that $\frac{2}{4}$ is less than $\frac{2}{3}$. They might also reason that since fourths are smaller than thirds, two fourths must be smaller than two thirds.

FREQUENTLY ASKED QUESTIONS ABOUT UNIT 4

Q: Why do the problems ask students to use number lines to think about fractions?

A: Students have used number lines since kindergarten to represent and compute with whole numbers. Using the number line to represent fractions connects new concepts to students' prior work with whole numbers. Double number lines, similar to the one featured in the third example above, can help students compare fractions and identify equivalent fractions.

Q: Why doesn't my child solve the addition and subtraction problems the way I remember doing it?

A: Many adults would use the standard algorithm to add the numbers in the first example problem above.

$$\begin{array}{r} {\scriptstyle 1\,1} \\ 167 \\ +\ 189 \\ \hline 356 \end{array}$$

This method is reliable: when the steps are carried out properly, it produces the correct answer every time. This is the strength of algorithms—accuracy and reliability—and students will be expected to use the standard algorithms for addition and subtraction by the end of fourth grade. In third grade, they use other methods that build number sense and that sometimes lend themselves more readily to mental computation and estimation.