

KEY CONCEPT OVERVIEW

During the next few days, our math class will explore measurement by using both customary units of length (e.g., inches, feet, **yards**) and metric units of length (e.g., centimeters, meters). We will rotate through various centers and choose appropriate tools to measure a variety of objects. We will develop mental benchmarks for customary units. For example, the width of a quarter is about one inch, and the length of a sheet of paper is about one foot. We will measure the same object twice by using different customary and metric units. This will reinforce prior learning that it takes more smaller units (e.g., centimeters) than larger units (e.g., inches) to measure the same object. Finally, we will measure to compare objects, determining how much longer one is than another.

You can expect to see homework that asks your child to do the following:

- Choose the best unit (e.g., inch, foot, yard) to measure a given object.
- Estimate the length of a given item by using a mental benchmark; then measure the item by using inches, feet, or yards.
- Measure a line by using both centimeters and inches. Compare the measurements and relate the difference to the sizes of the length units.
- Measure and compare two lengths and use addition or subtraction to determine the difference.

SAMPLE PROBLEM (From Lesson 18)

Sam draws a line that is 11 centimeters long. Susan draws a line that is 8 inches long. Susan thinks her line is shorter than Sam's because 8 is less than 11. Explain why Susan's reasoning might be incorrect.

Susan's reasoning might be incorrect because the size of the length unit matters. The 8-inch line could be longer than the 11-centimeter line because even though 8 is a smaller number than 11, an inch is a larger length unit than a centimeter.

(NOTE: Susan's line is longer than Sam's.)

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

HOW YOU CAN HELP AT HOME

- Invite your child to create a list of mental benchmarks. For example, a 12-inch ruler can be a mental benchmark for 12 inches or 1 foot; the width of a door is about 1 yard; the width of a quarter is about 1 inch.
- Play an estimation game with your child. Challenge him to estimate the length of objects around the home, and then have him measure each one to see how close his estimate is to the actual measurement.
- Invite your child to draw one line that is 5 centimeters long and another line that is 5 inches long. Then ask her, “Why is one line longer when the number of units is the same?” (The same number of units makes a longer line when using inches rather than centimeters because inches are longer than centimeters.) OR (It takes more centimeters than inches to measure an object because centimeters are shorter.)

TERMS

Yard (yd): A unit of length equal to 36 inches or 3 feet.