

Unit 12

Family Letter

Reveal
MATH

Dear Family,

In this unit, Measurement and Data, your child will learn how to convert between customary units of measure and also between metric units of measure, and how to create line plots and solve problems involving measurement data on line plots.

STEM Career Kid for this Unit

Hi, I'm Finn.

I want to be a construction manager. I will use math in my job when I order building materials. I'll show students how I will use math when I order wooden boards with different thicknesses.



What math terms will your child use?

Term	Student Understanding
customary units of measure	Units such as yards, feet, and inches; tons, pounds, and ounces; gallons, quarts, and cups
metric units of measure	Units such as kilometers, meters, and centimeters; liters and millimeters; kilograms, grams, and milligrams
line plot	a way to visually represent data



What can your child do at home?

Help your child become comfortable with creating and using line plots. With your child, create a list of steps they can use to create a line plot. The list should include writing a title, deciding which interval to use, and indicating which unit of measurement is used. Once a line plot is created, have your child show you how they can use it to answer questions about the data.

What Will Students Learn in This Unit?

Converting Between Customary Units of Measurement

Your child will learn to when to multiply and when to divide when converting between customary units of measurement.

Example: Jill uses 6 quarts of fruit juice in a recipe for punch. How many gallons of fruit juice does Jill use?

To solve, use the equivalent measure $1 \text{ gal} = 4 \text{ qt}$. Since quarts is a smaller unit than gallons, divide:

$$6 \div 4 = \frac{6}{4} = \frac{3}{2} = 1\frac{1}{2}$$

Jill uses $1\frac{1}{2}$ gallons of fruit juice.

Converting Between Metric Units of Measurement

Your child will learn when to multiply and when to divide when converting between metric units of measurement.

Example: A hiking trail is 3.2 kilometers long. How many meters long is the trail?

To solve, use the equivalent measure $1 \text{ km} = 1,000 \text{ m}$. Since km is a larger unit than m, multiply:

$$3.2 \times 1,000 = 3,200$$

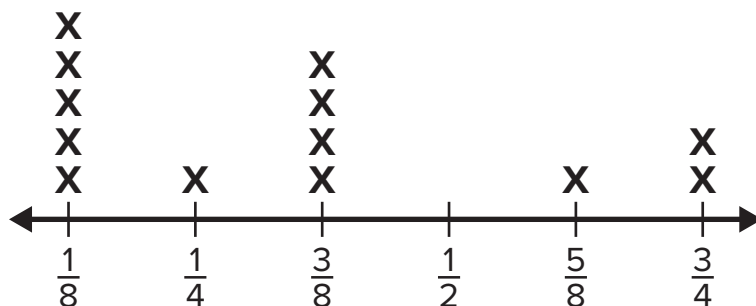
The trail is 3,200 meters long.

Using a Line Plot to Solve Problems

Your child will learn how to use a line plot and operations to solve problems.

Example: Mason measures the weight, in pounds, of sweet potatoes from his garden. The line plot shows the different weights of the sweet potatoes.

Weight of Sweet Potatoes (pounds)



What is the total weight of the sweet potatoes?

To solve, use addition and multiplication.

$$(5 \times \frac{1}{8}) + \frac{1}{4} + (4 \times \frac{3}{8}) + \frac{5}{8} + (2 \times \frac{3}{4}) = \frac{5}{8} + \frac{1}{4} + \frac{12}{8} + \frac{5}{8} + \frac{6}{4}$$

$$\text{Using a common denominator: } \frac{5}{8} + \frac{2}{8} + \frac{12}{8} + \frac{5}{8} + \frac{12}{8} = \frac{36}{8} = 4\frac{1}{2}$$

Mason picked $4\frac{1}{2}$ pounds of sweet potatoes.