

Eureka Math Parent Guide

A GUIDE TO SUPPORT PARENTS AS THEY WORK WITH THEIR STUDENTS IN MATH.

**GRADE 4
MODULE 2**

GRADE FOCUS

Fourth grade mathematics is about (1) developing understanding and fluency with multi-digit multiplication and division; (2) developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; and (3) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

- Module 1: Place Value, Rounding, and Algorithms for Addition and Subtraction
- » **Module 2: Unit Conversions and Problem Solving with Metric Measurement**
- Module 3: Multi-Digit Multiplication and Division
- Module 4: Angle Measure and Plane Figures
- Module 5: Fraction Equivalence, Ordering, and Operations
- Module 6: Decimal Fractions
- Module 7: Exploring Multiplication

LET'S CHECK IT OUT!

MODULE 2 FOCUS

In Module 2 we use length, mass, and capacity in the metric system to convert between units using place value knowledge. We will explore the patterns in the place value system through metric unit conversions, and will use mixed unit conversions to prepare for fraction and decimal operations to come.

MORE SPECIFICALLY, CHILDREN WILL LEARN HOW TO:

- Know relative sizes of measurement units within one system of units including kilometer (km), meter (m), centimeter (cm); kilogram (kg), gram (g); pound (lb), ounce (oz); liter (l), milliliter (ml); hour (hr), minute (min), second (sec). Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit.
- Use the four operations to solve word problems involving distances, liquid volumes, and masses of objects. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

TOPIC OVERVIEW

Topics are the lessons within a module that help children master the skills above. Here are the lessons that will guide your child through Module 2:

- Topic A: Metric Unit Conversions
- Topic B: Application of Metric Unit Conversions

WORDS TO KNOW

- **Kilometer (km):** a unit of measure for length
- **Mass:** the measure of the amount of matter in an object
- **Milliliter:** mL, a unit of measure for liquid volume
- **Mixed units:** e.g., 3 m 43 cm
- **Capacity:** the maximum amount that something can contain
- **Convert:** to express a measurement in a different unit
- **Kilogram (kg), gram (g):** units of measure for mass
- **Length:** the measurement of something from end to end
- **Liter (L):** unit of measure for liquid volume
- **Meter (m), centimeter (cm):** units of measure for length
- **Weight:** the measurement of how heavy something is

SAMPLE PROBLEMS

SAMPLE 1

Learning real-life representations of metric units is an important part of internalizing and understanding metric conversions.

A typical fill-in-the-blank conversion table in Module 2

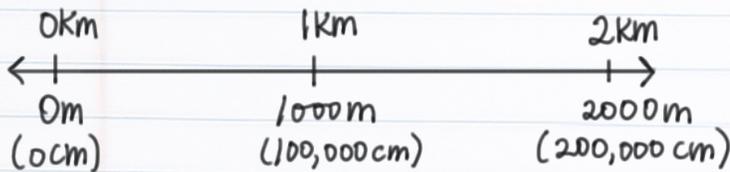
Metric Units of Length

Centimeter	Meter	Kilometer
• length of staple	• height of countertop	• distance from the school to the train station

Mass	
Kg	g
1	1,000
6	
	8,000
15	
	24,000
550	

SAMPLE 2

A number line from Module 2 showing multiple metric conversions



A number line from Module 2 showing both single unit and mixed unit numbers

SAMPLE 3

The potatoes Beth bought weighed 3 kilograms 420 grams. Her onions weighed 1,050 grams less than the potatoes. How much did the potatoes and onions weigh together?

Potatoes 3kg 420g

Onions V 1,050g

} W

$$\begin{array}{r}
 3\text{kg } 1,420\text{g} \\
 - 1,050\text{g} \\
 \hline
 2\text{kg } 370\text{g}
 \end{array}
 +
 \begin{array}{r}
 3\text{kg } 420\text{g} \\
 + 2\text{kg } 370\text{g} \\
 \hline
 5\text{kg } 790\text{g}
 \end{array}$$

onions 2kg 370g 5kg 790g

The potatoes and onions weigh 5kg 790g.

HOW YOU CAN HELP AT HOME

- If you have metric measurement tools at home, encourage your student to measure objects around the house.
- Continue to talk about place value patterns with your student, e.g. how many 10s in 100? How many 100s in 1000?
- Review the vocabulary words in this unit, especially the new metric measurement words.