

8**Family Letter****Dear Parent or Guardian:**

We use measurement skills in our daily lives, from estimating the length, weight, or capacity of an object to actually calculating its measurements or comparing measurements of multiple objects. It is often necessary to be able to convert from one measurement to another.

In **Chapter 8, Systems of Measurement**, your child will learn the various measurement units for length, weight, and capacity in both the customary and the metric systems. Students will also learn how to change units within the metric system and estimate the metric measure of objects. They will learn about time and temperature. In the study of this chapter, your child will complete a variety of daily classroom assignments and activities and possibly produce a chapter project.

By signing this letter and returning it with your child, you agree to encourage your child by getting involved. Enclosed is an activity that you can do with your child that practices how the math we will be learning in Chapter 8 might be tested. You may also wish to log on to **www.msmath1.com** for self-check quizzes and other study help. If you have any questions or comments, feel free to contact me at school.

Sincerely,

Signature of Parent or Guardian _____ Date _____

8**Family Activity****State Test Practice**

Fold the page along the dashed line. Work each problem on another piece of paper. Then unfold the page to check your work.

- Four boards are measured in metric units. They are 24.1 cm, 2.41 m, 240.8 mm, and 0.45 km. Put the lengths of these boards in order from least to greatest.
 - 24.1 cm, 2.41 m, 240.8 mm, 0.45 km
 - 2.41 m, 240.8 mm, 0.45 km, 24.1 cm
 - 0.45 km, 2.41 m, 24.1 cm, 240.8 mm
 - 240.8 mm, 24.1 cm, 2.41 m, 0.45 km
- Michael's mom sent him to the grocery store to buy a bag of sugar to use in cookies for the Student Council bake sale. What is a reasonable unit of measure for amount of sugar he bought?
 - milligrams
 - gallons
 - pounds
 - tons

Fold here.

Solution

- Hint: Convert all of the various units to the same unit. In this case, changing to meters is a reasonable choice because there are units smaller and bigger than the meter listed.*

$$1 \text{ cm} = 0.01 \text{ m}; \text{ so } 24.1 \text{ cm} = 0.241 \text{ m}$$

$$1 \text{ mm} = 0.001 \text{ m}; \text{ so } 240.8 \text{ mm} = 0.2408 \text{ m}$$

$$1 \text{ km} = 1,000 \text{ m}; \text{ so } 0.45 \text{ km} = 450 \text{ m}$$

Put all meter measures in order and write their equivalents.

$$0.2408 \text{ m} \rightarrow 240.8 \text{ mm}$$

$$0.241 \text{ m} \rightarrow 24.1 \text{ cm}$$

$$2.41 \text{ m} \rightarrow 2.41 \text{ m}$$

$$450 \text{ m} \rightarrow 0.45 \text{ km}$$

The answer is **D**.

Solution

- Measures of volume are typically used for liquids, so gallons can be eliminated as an option. Milligrams are used to measure very small objects and tons are used for the weight of very large objects, eliminating both of those options. Sugar is usually sold in 5 and 10 pound bags, so option C is reasonable.

The answer is **C**.