

MATH NEWS

Grade 2 Module 7 Topic D

2nd Grade Math

Module 7: Problems Solving with Length, Money, and Data

Math Parent Letter

This document is created to give parents and students a better understanding of the math concepts found in Eureka Math (© 2013 Common Core, Inc.) that is also posted as the Engage New York material which is taught in the classroom. Module 7 of Eureka Math (Engage New York) covers strategies for problem solving to work with various types of units within context of length, money, and data. This newsletter will discuss Module 7, Topic D.

Topic D: Measuring and Estimating Length Using Customary and Metric Units

Words to Know:

Mental Benchmark: an object that is about the measurement of a given unit.

For example: length of paper = 1 foot, door width = 1 yard, middle part of finger = 1 inch



OBJECTIVES OF TOPIC D

Measure various objects using inch rulers and yardsticks.

Develop estimation strategies by applying prior knowledge of length and using mental benchmarks. =

Measure an object twice using different length units and compare; relate measurement to unit size.

Measure to compare the differences in lengths using inches, feet, and yards.

Focus Area– Topic D

Measure, Compare

Students apply their measurement skills and knowledge of the ruler to measure a variety of objects using the appropriate measurement tools, such as inch rulers and yardsticks, just as they measured with centimeter rulers, meter sticks, and meter tape in Module 2. Students develop mental images of an inch, a foot, or a yard, which empowers them to estimate a given length.

In addition, students measure objects twice using metric and customary length units, thereby developing an understanding of how the number of units needed depends upon the size of the unit chosen. Students also measure to determine how much longer one object is than another. Students use addition and subtraction to compare two lengths, subtracting the length of the shorter object from the length of the longer object to determine the difference.

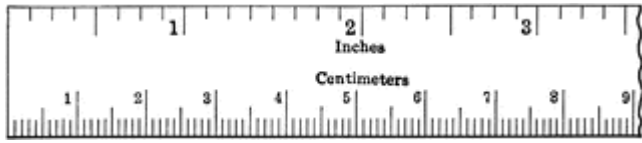
Example of Estimating Length Using Mental Benchmarks

Item	Mental Benchmark	Estimation	Actual Length
Width of door	Sheet of paper	4 feet	3 feet



 = 1 sheet of paper

Measure the line in inches and centimeters.
Round to the nearest inch or centimeter.



8 cm 3 in

Did you use more inches or more centimeters when measuring the line above?
I used more centimeters because centimeters are smaller.

←—————→

Examples of Problem Solving using Length

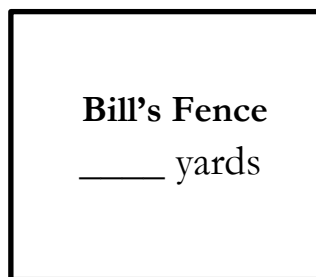
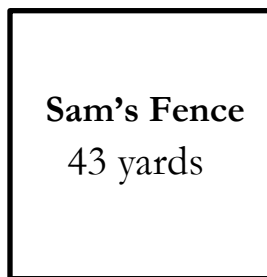
$$32 \text{ ft.} + \underline{55\text{ft}} = 87 \text{ ft.}$$

$$\begin{array}{ccccccc} & +8 & & +40 & & +7 & \\ & \longrightarrow & & \longrightarrow & & \longrightarrow & \\ 32 & & \longrightarrow & 40 & & \longrightarrow & 80 & & \longrightarrow & 87 \end{array} \quad (8 + 7 = 15, 15 + 40 = 55\text{ft.})$$

$$68 \text{ ft} - 29 \text{ ft} = \underline{39\text{ft}}$$

$$\begin{array}{ccc} -30 & & +1 \\ 68 & \longrightarrow & 38 & \longrightarrow & 39 \end{array}$$

Sam and Bill both built fences around their properties. Sam's fence is 43 yards long. Bill's fence is 19 yards longer than Sam's.



a. How long is Bill's fence? 62 yards

$$\begin{array}{ccc} +20 & & -1 \\ 43 & \longrightarrow & 63 & \longrightarrow & 62 \end{array}$$

b. What is the total length of both fences? 105 yards

$$\begin{array}{ccc} +60 & & +2 \\ 43 & \longrightarrow & 103 & \longrightarrow & 105 \end{array}$$