



## 2nd Grade Math

*Module 7: Problem 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 with length, money, and data. This newsletter will discuss Module 7, Topic E.

*Topic E: Problem Solving with Customary and Metric Units*

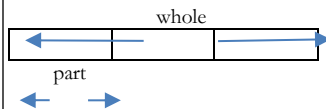
#### Words to Know:

**Compensation:** a mental math strategy in which the student changes a problem to an easier one to find the answer.

$$\begin{array}{r} 42 + 19 \\ \hline 41 \quad 1 \\ \hline 41 + 20 = 61 \end{array}$$

$$1 \text{ yard} = 36 \text{ inches}$$

**Tape Diagram:** a model that students draw to help them see the relationships between numbers



**Difference:** answer to a subtraction problem

**Hash Mark:** the lines that cross the number line to separate the units

**Endpoint:** the two points on each end of the number line

**Unit length:** space between hash marks

## Objectives of Topic E

Solve two-digit addition and subtraction word problems involving length by using tape diagrams and writing equations to represent the problem.

Identify unknown numbers on a number line diagram by using the distance between numbers and reference points.

Represent two-digit sums and differences involving length by using the ruler as a number line.

## Focus Area– Topic E

This topic focuses on using addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

Students will represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2... and represent whole-number sums and differences within 100 on a number line diagram.

### Keys to Math Signs

Sign	Questions to Look For
<b>Addition</b> +	What is the total? What is the combined...? How many all together? How many in all? What is the sum?
<b>Subtraction</b> -	How many fewer? How many less? What is the difference?

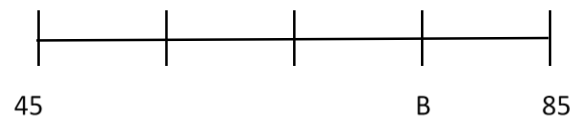
### Finding the Value on a Number Line

Example:

1. Find the value of Point B on the number line. 75

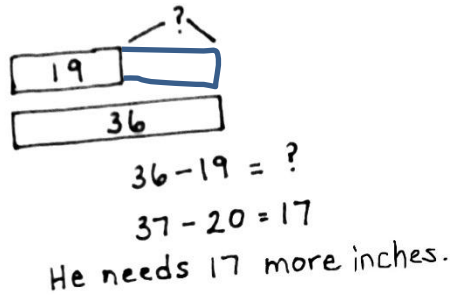
2. What is the difference between the two endpoints?

$$\underline{85 - 45 = 40}$$



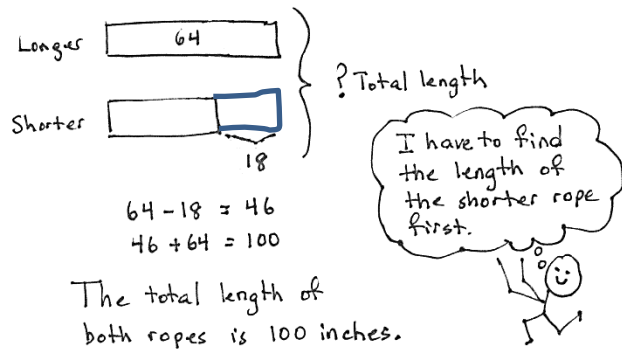
**Solve using a tape diagram. Use a symbol (?) for the unknown.**

Mr. Ramos has knitted 19 inches of a scarf he wants to be 1 yard long. How many more inches of scarf does he need to knit?



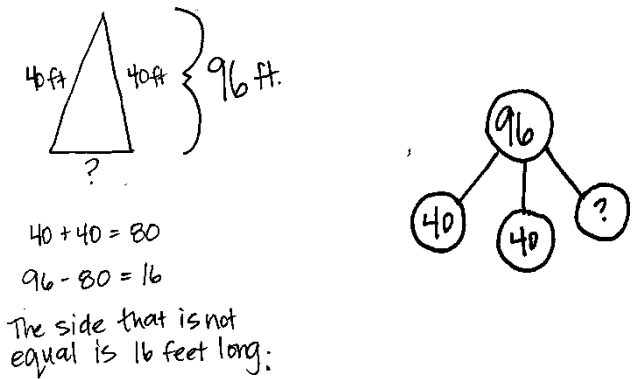
**Solve a two-step problem using a tape diagram.**

Frankie has a 64-inch piece of rope and another piece that is 18 inches shorter than the first. What is the total length of both ropes?



**Solve a problem involving geometry.**

The total length of all three sides of a triangle is 96 feet. The triangle has two sides that are the same length. One of the equal sides measures 40 feet. What is the length of the side that is not equal?



**Measure the length of the object using the number line and compensation to simplify.**

