

Lesson 11

Course 2-Teacher Notes

Objective: TSW write equations for one-step word problems about combining and separating.

FORMULA: is an equation that represents a rule or method for doing something.

When solving word problems, it is helpful to understand the plot of the word problem.

One word problem plot is: COMBINING.

Example: Albert has \$12. Betty has \$15. **Together** they have \$27

Combining Formula:

Some + Some More = Total $\rightarrow s + m = t$

**In word problems, use a variable to represent the unknown number.

In combining:

If the total is unknown, we add the "S" and the "M"

If an addend is unknown, we subtract the known addend from the sum to find the missing addend.

Example 1.

In the morning, the trip odometer in Mr. Chin's car read 47 miles. At the end of the day the trip odometer read 114 miles. How many miles did Mr. Chin drive that day?

Understand: We recognize that this problem has an addition pattern. Mr. Chin drove some miles and then he drove some more.

Plan: Write an equation for the given information. ($S + M = T$)

$\rightarrow 47 + M = 114$

Solve: To find M, an unknown addend, we subtract "S" from "T".

$114 - 47 = 67$. $M = 67$ miles

Check: $47 + 67 = 114$

Example 2.

The first scout troop encamped in the ravine. A second troop of 137 scouts joined them, making a total of 312 scouts. How many scouts were in the first troop?

Formula: $S + 137 = 312 \rightarrow 312 - 137 = 175$ scouts.

175 Scouts in the first troop.

Check: $175 + 137 = 312$

Another word problem plot is: Separating

Separating Formula:

$$\text{Beginning amount} - \text{some went away} = \text{what remains} \rightarrow b - a = r$$

**To find the subtrahend in a subtraction pattern, we subtract.

Question: Which number in the subtraction problem is the subtrahend? "a"

Example 3.

Tim baked 4 dozen muffins. He made a platter with some of the muffins and gave them away to the school bake sale. He had 32 muffins left which he packed in freezer bags to store in the freezer. How many muffins did Time give away to the bake sale?

Understand: We recognize that this problem is about separating. Tim had some muffins and then some went away.

Plan: Write an equation for the given information ($b - a = r$)

First, how many muffins in 4 dozen? 48

$$\rightarrow 48 - a = 32$$

Solve: To find the missing subtrahend, subtract difference from minuend.

$$48 - 32 = 16 \text{ muffins}$$

Check:

$$48 - 16 = 32$$

***** This may help you to set up and solve problems correctly:

If $a + b = c$ then

$$c - b = a \text{ and}$$

$$c - a = b$$

If $a - b = c$ then

$$c + b = a \text{ and}$$

$$a - c = b$$

CW: 1-3, 10, 4, 6, 17, 18, 25, 5

HW: 7-9, 7-16, 19-24, 26-30