

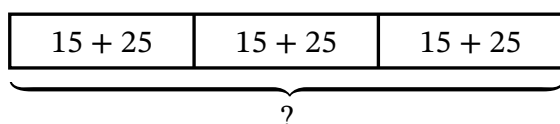
FAMILY MATH

Multi-Step Problems with Whole Numbers

Dear Family,

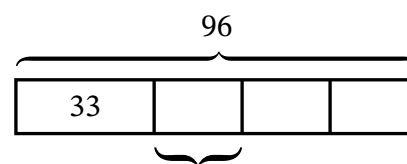
Your student is learning how the operations addition, subtraction, multiplication, and division are used in real-world situations. They draw and analyze tape diagrams to see how statements and expressions are related. Then they write word problems to match an expression or tape diagram. They explore how placing parentheses in an expression can change its value. Your student uses operations with whole numbers to solve multi-step word problems. They see there are multiple ways to draw a model to represent a problem.

3 times the sum of 15 and 25



$$3 \times (15 + 25)$$

The statement, tape diagram, and expression all represent the same mathematical relationship. The parentheses in the expression correspond to the groups shown in the tape diagram.



Sample:

Blake makes 96 muffins for the bake sale. He sells 33 of them and puts the remaining muffins in 3 containers to take home. If he puts the same number of muffins in each container, how many muffins are in each?

The sample shows a word problem that can be represented by this tape diagram. As long as the relationship between the numbers stays the same, the context of the problem can change.

At-Home Activity

Birthday Word Problem

Have your student write their birthday or another important date in number form by using four digits for the year. Ask them to use the numbers in the date to create an expression that includes two different operations (+, −, ×, or ÷) and parentheses.

- For the date August 19, 2011, your student would write an expression with the numbers 8, 19, and 2,011 such as $2,011 - (8 \times 19)$.

Then have them write a word problem that matches their expression.

- A word problem to match $2,011 - (8 \times 19)$ is: I scored 2,011 points in my video game. Then I got to the last level. I tried to pass the level and failed 8 times. Each time I tried to pass the level and failed, I lost 19 points. How many points do I have now?

Finally, they can evaluate the expression and solve their word problem.

- $$\begin{aligned} 2,011 - (8 \times 19) &= 2,011 - 152 \\ &= 1,859 \end{aligned}$$

I have 1,859 points now.