EUREKA MATH™ TIPS FOR PARENTS

KEY CONCEPT OVERVIEW

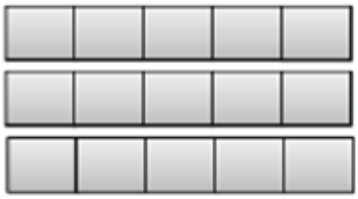
In Topic A, students use a tape diagram to examine relationships between operations. They begin by exploring the relationship between addition and subtraction. Next, they explore the relationships between multiplication and division and multiplication and addition. Students conclude the topic by exploring how subtraction and division are related.

You can expect to see homework that asks your child to do the following:

- Fill in the missing part of a **number sentence** or **equation**.
- Explain why the equations $w - x + x = w$ and $w + x - x = w$ are called **identities**.
- Examine and describe the relationships between operations.
- Write an **equivalent expression** to show a specific relationship. For example, 3×9 is equivalent to $9 + 9 + 9$, or $3d$ is equivalent to $d + d + d$.
- From a division equation, write the related subtraction equation, draw the tape diagram, and determine the value of the **variable**. (See the Sample Problem.)

SAMPLE PROBLEMS *(From Lessons 3-4)*

Write the addition and multiplication **expressions** that describe the model.



$5 + 5 + 5$ *and* 3×5

Using the equation $18 \div x = 3$, write a related subtraction equation, and represent it as a tape diagram. Then, state the value of x.

$18 - x - x - x = 0$

$x = 6$

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

HOW YOU CAN HELP AT HOME

You can help at home in many ways. Here are some tips to help you get started.

- Read this statement with your child: "When a number is multiplied and divided by the same number, the result is the original number." For example, $11 \times 5 \div 5 = 11$. Ask your child to write a few examples to show this. Discuss with your child why the equation $3 \times 9 \div 3 = 9$ does not represent this statement. (A number is not multiplied and then divided by the same number. The 3 is multiplied by 9 and then divided by 3, not 9.)
- With your child, create a few examples of real-life money situations where the result is the original number. For example, say that you have $10. You spend $5 at the store. Then you find $5 on the sidewalk. How do your examples relate to the identities $w - x + x = w$ or $w + x - x = w$? $(10 - 5 + 5 = 10)$

TERMS

Equation: A statement indicating that two expressions are equal (e.g., $3 \times 4 = 6 \times 2$ and $5 + x = 20$).

Equivalent expressions: Expressions that have the same value (e.g., 2×6 is equivalent to $4a$ if $a = 3$).

Expression: A group of numbers, symbols, and operators such as + and − with no equal sign that evaluates to a number (e.g., 2×4 and $9n + 7$).

Identity: An equation that is true no matter what values are substituted for the variables (e.g., $w - x + x = w$ because w and x can be replaced with any numbers, and the equation would remain true).

Number sentence: A statement indicating that two numerical expressions are equal (e.g., $8 - 2 = 5 + 1$).

Variable: A symbol, such as a letter, that is a placeholder for a number.