EUREKA MATH™ TIPS FOR PARENTS

KEY CONCEPT OVERVIEW

Lessons 7 through 10 introduce two strategies for solving challenging multiplication problems: the **commutative property** and the **break apart and distribute strategy**.
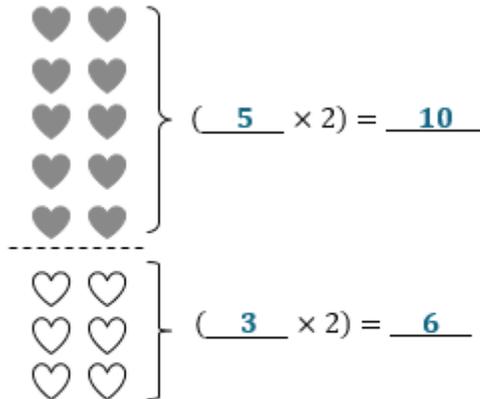
You can expect to see homework that asks your child to do the following:

- Show understanding of the commutative property and the break apart and distribute strategy.
- Solve word problems involving these two strategies.

SAMPLE PROBLEM *(From Lesson 10)*

Use the array to help you fill in the blanks.

$$8 \times 2 = \underline{\quad 16 \quad}$$

$$(\underline{\quad 5 \quad} \times 2) = \underline{\quad 10 \quad}$$

$$(\underline{\quad 3 \quad} \times 2) = \underline{\quad 6 \quad}$$

$$(5 \times 2) + (3 \times 2) = \underline{\quad 10 \quad} + \underline{\quad 6 \quad}$$

$$\underline{\quad 8 \quad} \times 2 = \underline{\quad 16 \quad}$$

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.
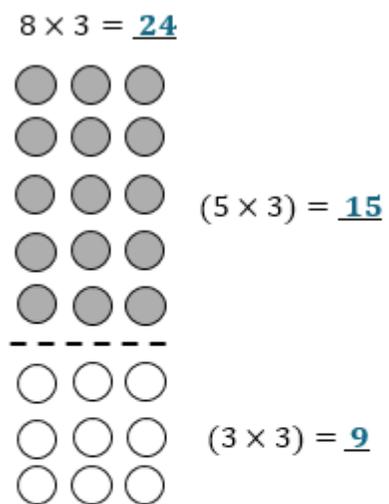
HOW YOU CAN HELP AT HOME

- Ask your child to arrange objects around the house into a large array, like 8×3. Then have him break the array into two smaller parts and write a multiplication sentence for each of the parts. For example, he could separate the 8×3 into the more manageable parts of $(5 \times 3) + (3 \times 3)$ in order to solve in a more efficient way. $5 \times 3 = 15$, $3 \times 3 = 9$, and $15 + 9 = 24$.

- Think of a number that is a multiple of 2, 3, 4, 5, or 10. Say the number to your child. Ask him to write as many multiplication problems as he can think of with that number. For example, say "20," and your child should be able to say 2×10 and/or 10×2, 1×20 and/or 20×1, and 4×5 and/or 5×4. You can also have your child think of the unknown number. For example, "4 times what number makes 20?"

TERMS

Commutative property: This property states that factors can change their order without changing the total. For example, $3 \times 4 = 4 \times 3$.

MODELS

Break Apart and Distribute Strategy: This strategy states that a multiplication expression can be broken into parts that can then be added together.

$8 \times 3 = \underline{24}$

$(5 \times 3) = \underline{15}$

$(3 \times 3) = \underline{9}$

$$8 \times 3 = (5 \times 3) + (3 \times 3)$$
$$= \underline{15} + \underline{9}$$
$$= \underline{24}$$