

Grade 3 Module 1

Tips for Families

Key Concepts Overview

Focus TEKS: **3.4D, 3.4E, 3.4F, 3.4H, 3.4J, 3.4K, 3.5A, 3.5B, 3.5D**

The focus of Module 1 is building conceptual understanding of multiplication and division with units of 2–5 and 10, exploring the relationship between multiplication and division, and solving word problems. Your student will:

- ☐ Identify the **number of groups** and the **size of each group** in an **array**.
- ☐ Write **multiplication** equations using an array.
- ☐ **Divide** objects into **equal groups** or show how many objects are in a group.
- ☐ Solve word problems with **unknown factors** and find the **quotient**.
- ☐ Show understanding of the **commutative property** and the break apart and **distribute** strategy and solve word problems involving these two strategies.
- ☐ Solve word problems involving the two different types of division problems (determine the size of the group or determine the number of groups).
- ☐ Solve multiplication and division problems that use **units** of 2–5 and 10.
- ☐ Break apart arrays and number bonds into smaller multiplication and division problems using the break apart and distribute strategy.
- ☐ Solve two-step word problems using addition, subtraction, multiplication, and/or division.

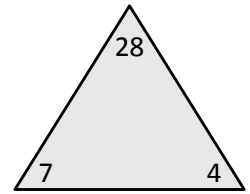
You can use the checklist above to help monitor your student’s progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

- Place various objects into arrays in your daily life, such as crackers on a plate, crayons, or toys that your student may have. Say to him, “How many rows are there? How many objects are in each row? Let’s skip-count the rows to find the total.”
- With your student, arrange objects (such as small snack foods like crackers, fruit snacks, grapes, or pretzels) into arrays. Then ask her to write two multiplication and two division equations that the array could represent. For example, display 4 rows of 3 grapes. The student could write $4 \times 3 = 12$, $3 \times 4 = 12$, $12 \div 3 = 4$ and $12 \div 4 = 3$.
- Ask your student to arrange objects into an array with one larger factor, such as 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 8×3 into the more manageable parts of $(5 \times 3) + (3 \times 3)$. $5 \times 3 = 15$, $3 \times 3 = 9$, and $15 + 9 = 24$. Therefore, $8 \times 3 = 24$.

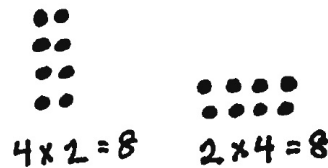


- Continue to practice multiplication and division equations from memory with factors of 2, 3, 4, 5, and 10. Have your student cut several triangles out of paper. Think of a multiplication or division fact. In each triangle, write two factors and their product (one number per corner). Ask her to state two multiplication and two division equations relating the numbers on each triangle. Cover one number with your thumb and ask her to figure out what number is hidden.

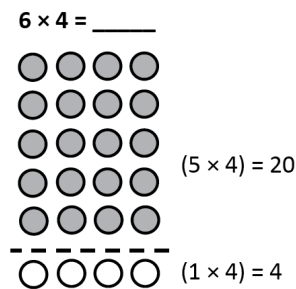


Terms

Commutative property/commutative (*Propiedad conmutativa/conmutativa*): changing the order of the factors in a multiplication expression or equation does not change its product



Distribute (*Distributivo*): to multiply each part of a decomposed factor by the other factor, or to divide each part of a decomposed total by the divisor



$$\begin{aligned}(6 \times 4) &= (5 \times 4) + (1 \times 4) \\ &= 20 + 4 \\ &= 24\end{aligned}$$

Factors (*Factores*): the numbers multiplied together in a multiplication expression or equation

$$\begin{array}{ccccc} \underline{\hspace{1cm}} & \times & \underline{\hspace{1cm}} & = & \underline{\hspace{1cm}} \\ \text{factor} & & \text{factor} & & \text{product} \end{array}$$



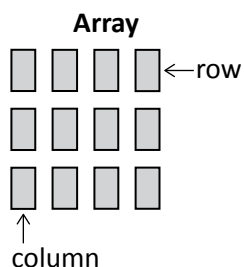
Quotient (*Cociente*): the number resulting from the division of two numbers



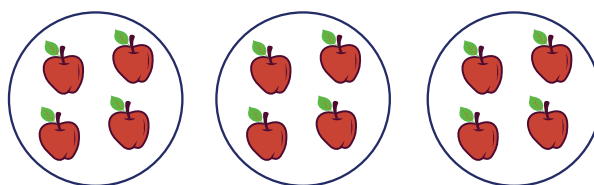
$$8 \div 4 = 2$$

↑
quotient

Models



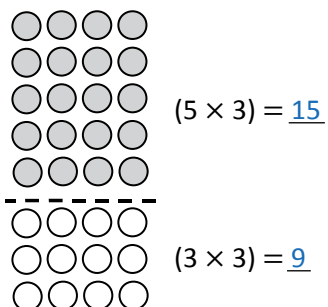
Equal Groups



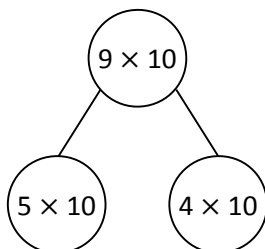
The **number of groups** is 3. The **size of the groups** is 4 apples.

Break Apart and Distribute Strategy

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



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



Strip Diagram

