

Grade 3 Module 3

Tips for Families

Key Concepts Overview

Focus TEKS: **3.2B, 3.4D, 3.4E, 3.4F, 3.4G, 3.4I, 3.4K, 3.5A, 3.5B, 3.5C, 3.5D, 3.5E**

The focus of Module 3 is exploring multiplication and division with units of 0, 1, 6–9, and **multiples** of 10, multiplying two-digit numbers by one-digit numbers, and solving word problems. Your student will:

- ☐ Explore multiplication as a comparison of one quantity to another and determine how many times greater one quantity is than another by using strip diagrams.
- ☐ Use **input–output tables** to explore multiplication as a comparison. For example, if 2 items go into a box and 4 items come out, the number that comes out is 2 times as much as the number that goes in.
- ☐ Find the value of the unknown in simple equations and in word problems.
- ☐ Solve multiplication and division problems that use units of 0, 1, 6, 7, 8, and 9.
- ☐ Use parentheses to group numbers to make an easier problem.
- ☐ Use the Read–Draw–Write process to solve two-step word problems involving addition, subtraction, multiplication, and division.
- ☐ Use place value disks and a place value chart to solve multiplication problems.
- ☐ Multiply two-digit numbers by one-digit numbers by drawing models and by using the standard algorithm.
- ☐ Solve word problems that require multiplying two-digit numbers by one-digit numbers.

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

- Continue to practice multiplication and division, including all facts up to 9s, from memory. Focus on the problems that your student needs more practice with. Use car rides, shopping trips, or other “in-between” times to have her exercise her math muscles.
- Have your student use cereal, small candies, stickers, or small toys to construct an array that represents multiplying by 6, 7, 8, or 9, such as 9×2 . Then ask him to separate the array after the fifth column. Next ask him to write and solve two smaller multiplication problems that would show how many total objects are in the larger array. So $9 \times 2 = (5 \times 2) + (4 \times 2)$. $9 \times 2 = 10 + 8$. $9 \times 2 = 18$.
- Play a memory match game with multiplication and division. Use note cards or paper to make two sets of cards. On the cards, write the expression for multiplication and division facts that your student needs more practice with, but do not include the answer. Then make a second set of cards showing the answers that match the expressions. Lay the expression set of cards on one side and the answer set on the other side. Players take turns turning over two cards at a time to see whether the



cards match a multiplication or division fact with its correct answer. If no match is made, the cards are turned face down. If a match is made, the player keeps the two cards. For example, if your student turns over one card that shows 8×7 and another showing 63, a match was not made. She must turn the cards facedown because $8 \times 7 = 56$, not 63. However, if she turns over cards showing 9 and $63 \div 7$, she keeps both cards because 9 is the correct answer for the division expression. Continue until all the cards in the array have been matched. The player with the most cards at the end of the game is the winner.

Terms

Expression (*Expresión*): a number or any combination of sums, differences, products, or divisions of numbers that evaluates to a number (e.g., 4×3)

Multiple (*Múltiple*): the product of a given number and another whole number. The numbers said when skip-counting by a number are multiples of that number (e.g., Multiples of 6: $6 \rightarrow 12 \rightarrow 18 \rightarrow 24 \rightarrow 30 \rightarrow 36 \rightarrow 42$)

Number sentence: an equation or inequality for which both expressions are numerical and can be evaluated to a single number (e.g., $4 \times 3 = 12$)

Parentheses (*Paréntesis*): symbols for grouping and ordering expressions

$6 + 12 = 3 \text{ sixes}$ $(1 \times 6) + (2 \times 6) = 3 \text{ sixes}$ $(1 \times 6) + (2 \times 6) = 6 + \underline{12}$

Partial product (*Producto parcial*): one of the products resulting from one factor in a two-factor multiplication expression being decomposed and each part being multiplied by the other factor

$$\begin{array}{r}
 23 \\
 \times 3 \\
 \hline
 9 \leftarrow \text{partial product} \\
 + 60 \leftarrow \text{partial product} \\
 \hline
 69
 \end{array}$$

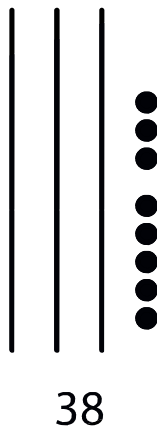
Product (*Producto*): the total when multiplying two or more numbers together



$$\begin{array}{c}
 4 \times 2 = 8 \\
 \uparrow \\
 \text{product}
 \end{array}$$

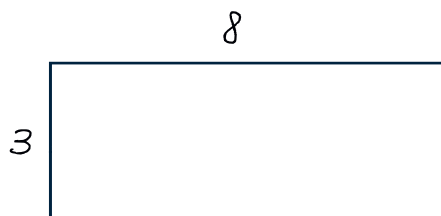


Value (*Valor*): the amount something is worth or represents



Models

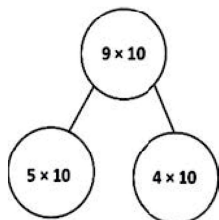
Area Model



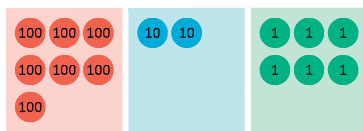
Input–Output Table

Input (Items Put into a Box)	Output (Items Taken Out of a Box)
2	4
10	20
8	16
3	6

Number Bond



Place Value Disks



Strip Diagram

