



3rd Grade American Math HW 11

Chapter 7: Multiplication Facts and Strategies

Dear Family,

Over the next few weeks, we will be learning multiplication with factors 2–12. Students will practice multiplication facts, strategies, and multiplication properties. **Please refer to last week's packet for definitions and examples of the multiplication properties.**

Vocabulary

- **Associative Property of Multiplication:** The property that states that when the grouping of factors is changed, the product remains the same.
- **Distributive Property:** The property that states that multiplying a sum by a number is the same as multiplying each addend by the number and then adding the products.
- **Multiple:** A number that is the product of two counting numbers

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- Homework due date: **Sunday, December 7th**
 - Chapter 7 Test on **Thursday, Dec. 4th** (Homework packet is practice for the test)
 - Feel free to contact me with any questions at diana.charaf@archimedean.org
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Complete homework daily based on the schedule provided below:

Monday 12/01
Tuesday 12/02
Wednesday 12/03
Thursday 12/04
Friday 12/05.

Pages: **268 - 281**
Pages: **309 - 310 - 311**
Pages: **312 - 313- 314**
No HW
No HW



Try This!

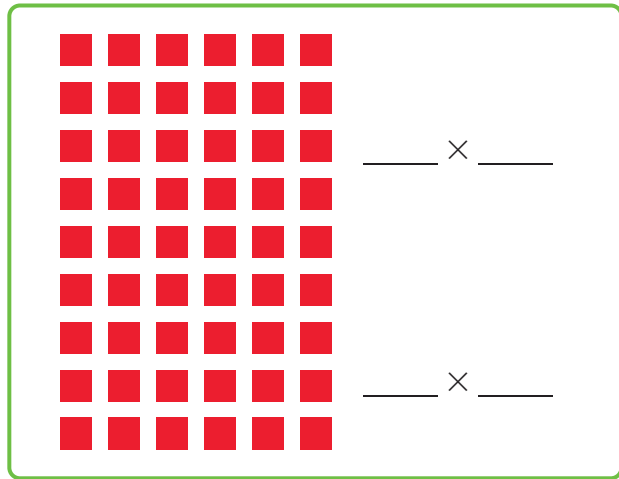
Suppose Mark bought 9 fish for \$6 each.

You can break apart a 9×6 array into two smaller arrays for facts you know. One way is to think of 9 as $5 + 4$. **Draw a line to show this way.** Then find the product.

$$9 \times 6 = (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad})$$

$$9 \times 6 = \underline{\quad} + \underline{\quad}$$

So, Mark spent \$ for 9 fish.



Share and Show



- Draw a line** to show how you could break apart this 6×8 array into two smaller arrays for facts you know.

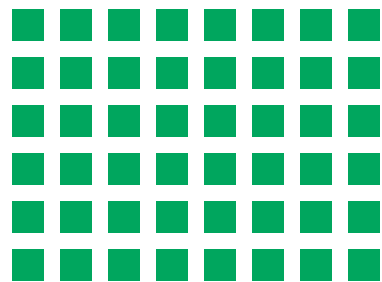
- What numbers do you multiply? and
 and
- What numbers do you add? +

$$6 \times 8 = 6 \times (\underline{\quad} + \underline{\quad})$$

$$6 \times 8 = (\underline{\quad} \times \underline{\quad}) + (\underline{\quad} \times \underline{\quad})$$

$$6 \times 8 = \underline{\quad} + \underline{\quad}$$

$$6 \times 8 = \underline{\quad}$$

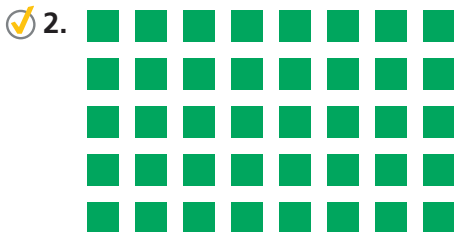


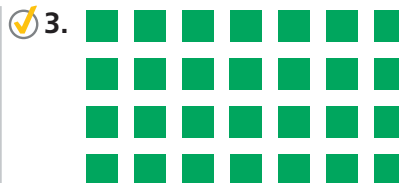
TR 4.1 Engage in discussions on mathematical thinking.

Why do you have to add to find the total product when you use the Distributive Property?

Write one way to break apart the array.

Then find the product. Draw a line to break the array and use Distributive Property





On Your Own**Write another way to group the factors. Then find the product.**

8. $(2 \times 3) \times 3$

9. $(8 \times 3) \times 2$

10. $2 \times (5 \times 5)$

11. $(3 \times 2) \times 4$

12. $(6 \times 1) \times 4$

13. $2 \times (2 \times 6)$

Use parentheses and multiplication properties. Then, find the product.

14. $6 \times 5 \times 2$

15. $2 \times 3 \times 5$

16. $3 \times 1 \times 6$

17. $2 \times 5 \times 6$

18. $2 \times 0 \times 8$

19. $1 \times 9 \times 4$

Find the unknown factor.

20. $7 \times (2 \times \underline{\quad}) = 56$

21. $30 = 6 \times (5 \times \underline{\quad})$

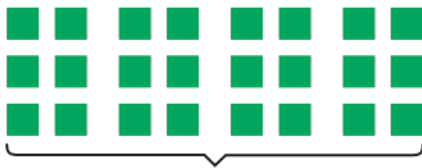
22. $\underline{\quad} \times (2 \times 2) = 32$

23. $42 = 7 \times (2 \times \underline{\quad})$

24. $8 \times (5 \times \underline{\quad}) = 40$

25. $0 = \underline{\quad} \times (25 \times 1)$

26. What equation does this array represent?
Write another way to group the factors.



27. Jamal has 65 quilt patches. He makes 2 quilts with 5 rows of 6 patches in each quilt. How many quilt patches will be left over?

Name _____

Chapter Review

1. Mrs. Ruiz sorted spools of thread into 4 boxes. Each box holds 5 spools. How many spools of thread does Mrs. Ruiz have?

Draw circles to model the problem. Then solve.

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2. For Problems 2a–2d, select True or False for each multiplication equation.

2a. $2 \times 8 = 16$ True False

2b. $5 \times 8 = 40$ True False

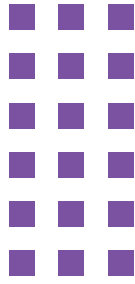
2c. $6 \times 8 = 56$ True False

2d. $8 \times 8 = 64$ True False

3. Describe one way to find the product 7×11 . Then find the product. (Use Distributive Property)

4. There are 7 days in 1 week. How many days are there in 4 weeks?

5. Circle groups to show $3 \times (2 \times 3)$.



6. Dale keeps all of his pairs of shoes in his closet. Select the number of shoes that Dale could have in his closet. Mark all that apply.

- (A) 3 (D) 7
 (B) 4 (E) 8
 (C) 6

7. Lisa completed the table to describe the product of a mystery one-digit factor and each number.

\times	1	2	3	4	5
?	even	even	even	even	even

Part A

Give all of the possible numbers that could be Lisa's mystery one-digit factor.

Part B

Explain how you know that you have selected all of the correct possibilities.

Name _____

8. Kate drew 7 octagons. An octagon has 8 sides.
How many sides did Kate draw?

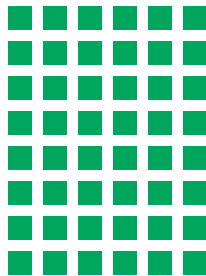


_____ sides

9. José buys 6 bags of flour. Each bag weighs 5 pounds.
How many pounds of flour did José buy?

_____ pounds

10. Break apart the array to show $8 \times 6 = (4 \times 6) + (4 \times 6)$.



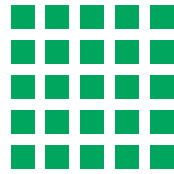
11. Circle the symbol that makes the multiplication equation true.

$$9 \times 6 \quad \begin{array}{|c|} \hline > \\ \hline < \\ \hline = \\ \hline \end{array} \quad 3 \times (3 \times 9)$$

12. Diandre puts 12 stamps on a page. He fills 9 pages in his book.
How many stamps does he have?

_____ stamps

13. A carpenter builds stools that have 3 legs each. How many legs does the carpenter use to build 5 stools? Use the array to explain how you know your answer is correct.



14. Etta buys some ribbon and cuts it into 7 pieces that are the same length. Each piece is 9 inches long. How long was the ribbon that Etta bought?

_____ inches

15. Antoine and 3 friends divide some pennies evenly among themselves. Each friend separates his pennies into 3 equal stacks with 5 pennies in each stack.

Write a multiplication equation that shows the total number of pennies.

16. Luke is making 4 first-aid kits. He wants to put 3 large and 4 small bandages in each kit. How many bandages does he need for the kits? Show your work.

_____ bandages

Name _____

17. For Problems 17a–17d, select True or False for each equation.

17a. $3 \times 7 = 21$ True False

17b. $5 \times 7 = 28$ True False

17c. $8 \times 7 = 49$ True False

17d. $9 \times 7 = 63$ True False

18. Circle the number that makes the multiplication equation true.

$$10 \times \begin{array}{|c|} \hline 4 \\ \hline 5 \\ \hline 8 \\ \hline \end{array} = 40$$

19. For Problems 19a–19d, select Yes or No to indicate whether the sum or product is equal to 8×6 .

19a. $8 + (4 \times 2) = \blacksquare$ Yes No

19b. $(8 \times 4) + (8 \times 2) = \blacksquare$ Yes No

19c. $(6 \times 4) + (6 \times 2) = \blacksquare$ Yes No

19d. $6 \times (4 + 4) = \blacksquare$ Yes No

20. Chloe bought 4 movie tickets. Each ticket cost \$6. What was the total cost of the movie tickets?

\$ _____

21. Write a multiplication equation using the following numbers and symbols.

6 60 5 2 () =

22. Louis started a table showing a multiplication pattern.

Part A

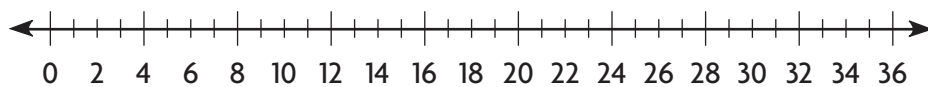
Complete the table. Describe a pattern you see in the products.

\times	1	2	3	4	5	6	7	8	9	10	11	12
3	3	6	9									

Part B

If you multiplied 3×37 , would the product be an even number or an odd number? Use the table to explain your reasoning.

23. Use the number line to show the product of 4×8 .



$4 \times 8 =$ _____

24. Write six multiples of 10.
