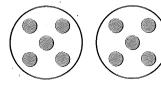
### Multiply with 2 and 4

**COMMON CORE STANDARD CC.3.0A.3** 

Represent and solve problems involving multiplication and division.

Write a multiplication sentence for the model.

1.



Think: There are 2 groups of 5 counters.

$$2 \times 5 = 10$$

2.









Find the product.

X

10. 
$$2 \times 4$$

- 11. On Monday, Steven read 9 pages of his new book. To finish the first chapter on Tuesday, he needs to read double the number of pages he read on Monday. How many pages does he need to read on Tuesday?
- 12. Courtney's school is having a family game night. Each table has 4 players. There are 7 tables in all. How many players are at the game night?

### Multiply with 5 and 10

#### **COMMON CORE STANDARD CC.3.0A.3**

Represent and solve problems involving multiplication and division.

Find the product.

**1.** 
$$5 \times 7 =$$
 **2.**  $5 \times 1 =$  **3.**  $2 \times 10 =$  **4.** \_\_\_\_ =  $8 \times 5$ 

2. 
$$5 \times 1 =$$
 \_\_\_\_\_

**4.** 
$$= 8 \times 5$$

5. 
$$1 \times 10 =$$
 6. \_\_\_\_ =  $4 \times 5$  7.  $5 \times 10 =$  8.  $7 \times 5 =$ 

6. \_\_\_\_ = 
$$4 \times 5$$

7. 
$$5 \times 10 =$$

8. 
$$7 \times 5 =$$

9. \_\_\_\_ = 
$$5 \times 5$$
 10.  $5 \times 8 =$  \_\_\_\_

10. 
$$5 \times 8 =$$

11. 
$$= 5 \times 9$$

11. \_\_\_\_ = 
$$5 \times 9$$
 12.  $10 \times 0 =$  \_\_\_\_

$$\begin{array}{ccc} \textbf{13.} & 5 \\ \times & 6 \end{array}$$

$$\begin{array}{ccc} \textbf{17.} & 5 \\ \times & 0 \end{array}$$

18. 
$$10 \times 8$$

**20.** 
$$10 \times 6$$



- 21. Ginger takes 10 nickels to buy some pencils at the school store. How many cents does Ginger have to spend?
- 22. The gym at Evergreen School has three basketball courts. There are 5 players on each of the courts. How many players are there in all?

### Multiply with 3 and 6

### COMMON CORE STANDARD CC.3.OA.3

Represent and solve problems involving multiplication and division.

Find the product.

1. 
$$6 \times 4 = 24$$

2. 
$$3 \times 7 =$$

3. 
$$\underline{\phantom{a}} = 2 \times 6$$

3. 
$$\underline{\hspace{1cm}} = 2 \times 6$$
 4.  $\underline{\hspace{1cm}} = 3 \times 5$ 

Think: You can use doubles.

$$3 \times 4 = 12$$
  
 $12 + 12 = 24$ 

$$6. = 6 \times 8$$

$$7.3 \times 9 =$$

**6.** \_\_\_\_ = 
$$6 \times 8$$
 **7.**  $3 \times 9 =$  \_\_\_ =  $6 \times 6$ 

13. 
$$10 \times 6$$

19. 
$$10 \times 3$$



- 21. James got 3 hits in each of his baseball games. He has played 4 baseball games. How many hits has he had in all?
- 22. Mrs. Burns is buying muffins. There are 6 muffins in each box. If she buys 5 boxes, how many muffins will she buy?

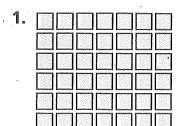
### **Distributive Property**

#### **COMMON CORE STANDARD CC.3.0A.5**

Understand properties of multiplication and the

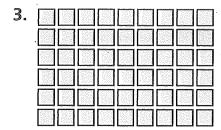
relationship between multiplication and division.

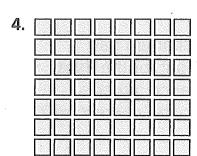
Write one way to break apart the array. Then find the product.



$$(3 \times 7) + (3 \times 7)$$









- **5.** There are 2 rows of 8 chairs set up in the library for a puppet show. How many chairs are there in all? Use the Distributive Property to solve.
- 6. A marching band has 4 rows of trumpeters with 10 trumpeters in each row. How many trumpeters are in the marching band? Use the Distributive Property to solve.

Name \_\_\_

### Multiply with 7

**COMMON CORE STANDARD CC.3.0A.7** 

Multiply and divide within 100.

Find the product.

**1.** 
$$6 \times 7 = 42$$
 **2.** \_\_\_ = 7 \times 9 **3.** \_\_\_ = 1 \times 7 **4.**  $3 \times 7 = _$ \_\_\_

$$2. _{2} = 7 \times 9$$

3. 
$$_{--} = 1 \times 7$$

4. 
$$3 \times 7 =$$
\_\_\_\_

5. 
$$7 \times 7 =$$
\_\_\_\_\_

$$6. = 2 \times 7$$

7. 
$$7 \times 8 =$$
\_\_\_\_\_

5. 
$$7 \times 7 =$$
 \_\_\_\_ =  $2 \times 7$  7.  $7 \times 8 =$  \_\_\_ =  $4 \times 7$ 

14. 
$$10 \times 7$$

- **19.** Julie buys a pair of earrings for \$7. Now she would like to buy the same earrings for 2 of her friends. How much will she spend for all 3 pairs of earrings?
- 20. Owen and his family will go camping in 8 weeks. There are 7 days in 1 week. How many days are in 8 weeks?

Name \_\_\_

# ALGEBRA Lesson 4.6

## **Associative Property of Multiplication**

### COMMON CORE STANDARD CC.3.0A.5

Write another way to group the factors. Then find the product.

Understand properties of multiplication and the relationship between multiplication and division.

1. 
$$(3 \times 2) \times 5$$
  
 $3 \times (2 \times 5)$   
30

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

7. 
$$9 \times 1 \times 5 =$$
\_\_\_\_\_

8. 
$$3 \times 3 \times 2 =$$

**9.** 
$$2 \times 4 \times 3 =$$
 \_\_\_\_\_

**10.** 
$$5 \times 2 \times 3 =$$

11. 
$$7 \times 1 \times 5 =$$
\_\_\_\_

$$|$$
 12. 8  $\times$  2  $\times$  3 = \_\_\_\_

**13.** 
$$7 \times 2 \times 3 =$$

$$| 14.4 \times 1 \times 3 =$$

| 15. 
$$10 \times 2 \times 4 =$$
\_\_\_\_\_

- **16.** Beth and Maria are going to the county fair. Admission costs \$4 per person for each day. They plan to go for 3 days. How much will the girls pay in all?
- 17. Randy's garden has 3 rows of carrots with 3 plants in each row.

  Next year he plans to plant 4 times the number of rows of 3 plants. How many plants will he have next year?

Lesson 4.7

### Patterns on the Multiplication Table

**COMMON CORE STANDARD CC.3.0A.9** 

Solve problems involving the four operations, and identify and explain patterns in arithmetic.

Is the product even or odd? Write even or odd.

1. 
$$2 \times 7 = 9990$$

Think: Products with 2 as a factor are even.

2. 
$$4 \times 6 =$$

2. 
$$4 \times 6 =$$
 \_\_\_\_\_ 3.  $8 \times 3 =$  \_\_\_\_

**4.** 
$$2 \times 3 =$$

5. 
$$9 \times 9 =$$

**4.** 
$$2 \times 3 =$$
 \_\_\_\_\_ **5.**  $9 \times 9 =$  \_\_\_\_ **6.**  $5 \times 7 =$  \_\_\_\_ **7.**  $6 \times 3 =$  \_\_\_\_

$$7.6 \times 3 =$$

Use the multiplication table. Describe a pattern you see.

8. in the column for 5

·		•	
	•		,

9. in the row for 10

,		
	V	
	•	

**10.** in the rows for 3 and 6

$(\times)$	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

- 11. Carl shades a row in the multiplication table. The products in the row are all even. The ones digits in the products repeat 0, 4, 8, 2, 6. What row does Carl shade?
- 12. Jenna says that no row or column contains products with only odd numbers. Do you agree? Explain.

Publist
Harcourt
Mifflin
loughton
т.

### Multiply with 8

COMMON CORE STANDARD CC.3.OA.7 Multiply and divide within 100.

Find the product.

1. 
$$8 \times 10 = 80$$
 2.  $8 \times 8 = 2$  3.  $8 \times 5 = 2$  4.  $3 \times 8 = 2$ 

3. 
$$8 \times 5 =$$
\_\_\_\_

4. 
$$3 \times 8 =$$

5. \_\_\_\_ = 
$$4 \times 8$$

6. 
$$8 \times 7 =$$

5. \_\_\_\_ = 
$$4 \times 8$$
 6.  $8 \times 7 =$  \_\_\_ 7.  $6 \times 8 =$  \_\_\_ 8. \_\_ =  $9 \times 8$ 

$$8 = 9 \times 8$$

- **19.** There are 6 teams in the basketball league. Each team has 8 players. How many players are there in all?
- 20. Lynn has 4 stacks of quarters. There are 8 quarters in each stack. How many quarters does Lynn have in all?
- 21. Tomas is packing 7 baskets for a fair. He is placing 8 apples in each basket. How many apples are there in all?
- **22.** There are 10 pencils in each box. If Jenna buys 8 boxes, how many pencils will she buy?

### Multiply with 9

COMMON CORE STANDARD CC.3.OA.7 Multiply and divide within 100.

Find the product.

1. 
$$10 \times 9 = 90$$
 2.  $2 \times 9 =$  3.  $9 \times 4 =$  4.  $0 \times 9 =$ 

2. 
$$2 \times 9 =$$
\_\_\_\_

3. 
$$9 \times 4 =$$
\_\_\_\_\_

4. 
$$0 \times 9 =$$
\_\_\_\_\_

5. 
$$1 \times 9 =$$
\_\_\_\_

6. 
$$8 \times 9 =$$

7. 
$$9 \times 5 =$$

5. 
$$1 \times 9 =$$
 \_\_\_\_\_ 6.  $8 \times 9 =$  \_\_\_\_ 7.  $9 \times 5 =$  \_\_\_\_ 8.  $6 \times 9 =$  \_\_\_\_



- **19.** There are 9 positions on the softball team. Three people are trying out for each position. How many people in all are trying out?
- **20.** Carlos bought a book for \$9. Now he would like to buy 4 other books for the same price. How much will he have to pay in all for the other 4 books?