Name _____ Date _____ Class _____

SKILL 10: Patterns Leading to Multiplication

You can use patterns to help you multiply.

Example 1

Find 5 × 7. First make 5 groups of 7 each.

To find how many there are in all, you can use *repeated addition:*

7 + 7 + 7 + 7 + 7 = 35

You could also *skip count* by 7s:

7 14 21 28 35

Both patterns show that 5 × 7 = 35.

The **commutative property of multiplication** can help you use facts you know to find other facts. The order in which two numbers are multiplied does not change the product.

Example 2

Write two multiplication facts shown by the array.

There are 4 rows of 8 each. So 4 × 8 = 32.

There are 8 columns of 4 each. So 8 × 4 = 32.

Guided Practice

1. Skip count to complete the problem

8, 16, _____, _____, _____, _____

2. So, 6 × 8 = _____.

Use the commutative property to complete each problem.

3. 9 × 5 = 45, so 5 × 9 = _____.

4. 4 × 7 = 28, so 7 × 4 = _____.

5. 8 × 5 = _____, so 5 × 8 = _____.

6. 7 × 8 = _____, so 8 × 7 = _____.

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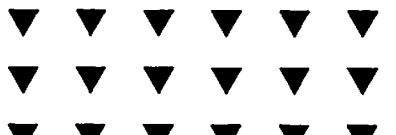
SKILL 10: Practice

Write the two multiplication facts shown by each array.

1. 

_____ × _____ = _____

_____ × _____ = _____

2. 

_____ × _____ = _____

_____ × _____ = _____

Skip count to complete each pattern.

3. Count by 6s: 6, 12, 18, _____, _____, _____, _____, _____, _____

4. Count by 7s: 7, 14, _____, _____, _____, _____, _____, _____, _____

5. Count by 8s: 8, _____, _____, _____, _____, _____, _____, _____, _____

6. Count by 9s: _____, _____, _____, _____, _____, _____, _____, _____, _____

Find each product.

7. $9 \times 4 =$ _____	**8.** $4 \times 9 =$ _____	**9.** $6 \times 6 =$ _____	**10.** $5 \times 7 =$ _____
11. $7 \times 5 =$ _____	**12.** $3 \times 8 =$ _____	**13.** $8 \times 9 =$ _____	**14.** $9 \times 8 =$ _____
15. $9 \times 6 =$ _____	**16.** $8 \times 3 =$ _____	**17.** $6 \times 9 =$ _____	**18.** $7 \times 7 =$ _____

Solve.

19. A florist made 4 bouquets of flowers. There are 6 flowers in each bouquet. How many flowers did the florist use to make all of the bouquets? _____

20. J. L. Plimpton patented the four-wheeled roller skate in 1863. How many wheels did he use to make the first 5 pairs of skates? _____

21. Which shows another name for $3 + 3 + 3 + 3 + 3$?

Skill 10

A 3×3 **C** 5×3

B $3 + 5$ **D** 5×5

22. Round 162,461 to the nearest thousand.

Skill 2

F 160,000 **H** 162,500

G 162,000 **J** 200,000