Name _____

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Homework & Practice 3-3
The Distributive Property

Another Look!

Hector's rock collection is stored in 7 cases. Each case holds 280 rocks. How many rocks are in Hector's collection?

You can use the Distributive Property to find the product of 7×280.

Step 1

Break apart 280 into $200 + 80$
$7 \times 280 = 7 \times (200 + 80)$

or

Break apart 280 into $300 - 20$
$7 \times 280 = 7 \times (300 - 20)$

Step 2

Multiply 7 times each part of the sum.
$(7 \times 200) + (7 \times 80)$
$1{,}400 + 560$

or

Multiply 7 times each part of the difference.
$(7 \times 300) - (7 \times 20)$
$2{,}100 - 140$

Step 3

Add.
$1{,}400 + 560 = 1{,}960$

or

Subtract.
$2{,}100 - 140 = 1{,}960$

So, $7 \times 280 = 1{,}960$.
Hector has 1,960 rocks in his collection.

For **1–8**, use the Distributive Property to find each product.

1. $8 \times 46 = 8 \times (40 + \_\_\_\_\_)$
$= (8 \times 40) + (\_\_\_\_\_ \times \_\_\_\_\_)$
$= \_\_\_\_\_ + \_\_\_\_\_$
$= \_\_\_\_\_$

2. $39 \times 5 = 5 \times (\_\_\_\_\_ - 1)$
$= (5 \times \_\_\_\_\_) - (5 \times 1)$
$= \_\_\_\_\_ - \_\_\_\_\_$
$= \_\_\_\_\_$

3. $6 \times 310 = 6 \times (300 + \_\_\_\_\_)$
$= (6 \times \_\_\_\_\_) + (\_\_\_\_\_ \times 10)$
$= \_\_\_\_\_ + \_\_\_\_\_$
$= \_\_\_\_\_$

4. $9 \times 895 = 9 \times (\_\_\_\_\_ - \_\_\_\_\_)$
$= (9 \times \_\_\_\_\_) - (\_\_\_\_\_ \times 5)$
$= \_\_\_\_\_ - \_\_\_\_\_$
$= \_\_\_\_\_$

5. 5×108

6. 2×62

7. $4 \times 1{,}554$

8. $2 \times 2{,}568$

9. **MP.7 Use Structure** Show how to use the Distributive Property to find $7 \times 1{,}214$.

10. A lodge at a state park has 49 rooms. Up to five people may stay in each room. What is the maximum number of people who can stay at the lodge at one time?

11. Lauren read 36 books during the year. If she reads the same number of books for 6 years in a row, how many total books will Lauren read?

12. A parking garage has 8 levels. Each level has parking spaces for 78 cars. How many cars can park in the garage at one time?

For **13–14**, use the table at the right.

13. A banquet room is being set up for a party using round tables. How many chairs are used for the round tables?

14. **Higher Order Thinking** Which of the three table types allows seating for the greatest number of people? Explain.

DATA

Hotel Banquet Room Plans

Type of Table	Number of Tables	Chairs that Fit Around Each
Long Dining Tables	62	8
Round Dining Tables	105	6
Square Dining Tables	150	4

Common Core Assessment

15. Joey's grade has a goal to collect 4,000 cans for the school canned-food drive. There are 486 students in Joey's grade. If each student brings in 8 cans of food, will the class reach its goal? Explain.