Name _____

LESSON 8.5

Algebra: Multiplication Properties

Identity Property	Zero Property
The product of 1 and any number is that number. $1 \times 6 = 6$ $6 \times 1 = 6$	The product of 0 and any number is 0. $9 \times 0 = 0$ $0 \times 9 = 0$
Commutative Property	**Associative Property**
This is also called the Order Property. You can multiply two factors in any order. The product is the same. $2 \times 4 = 8$ $\quad$ $4 \times 2 = 8$ $2 \times 4 = 4 \times 2$	This is also called the Grouping Property. You can group factors in different ways. The product is the same. The parentheses tell you which group to multiply first. $(2 \times 2) \times 3 = 2 \times (2 \times 3)$ $4 \times 3 = 12 = 2 \times 6$ So, $(2 \times 2) \times 3 = 2 \times (2 \times 3)$

Write the name of the property shown.

1. $5 \times 6 = 6 \times 5$ _____

2. $10 \times 1 = 10$ _____

3. $(2 \times 4) \times 3 = 2 \times (4 \times 3)$ _____

4. $11 \times 0 = 0$ _____

5. $7 \times 4 = 4 \times 7$ _____

6. $2 \times (3 \times 8) = (2 \times 3) \times 8$ _____

Find the product. Name the property you used.

7. 4×8 _____

8. $3 \times (5 \times 2)$ _____

9. 8×1 _____

10. $(3 \times 2) \times 4$ _____

11. 6×3 _____

12. 0×4 _____

13. $5 \times (3 \times 3)$ _____

14. 7×4 _____

15. $9 \times (2 \times 3)$ _____

Name _____

LESSON 8.5

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Write the name of the property shown.

1. $5 \times 6 = 6 \times 5$ — Commutative
2. $10 \times 1 = 10$ — Identity
3. $(2 \times 4) \times 3 = 2 \times (4 \times 3)$ — Associative
4. $11 \times 0 = 0$ — Zero
5. $7 \times 4 = 4 \times 7$ — Commutative
6. $2 \times (3 \times 8) = (2 \times 3) \times 8$ — Associative

Find the product. Name the property you used.

7. 4×8 — 32; Commutative
8. $3 \times (5 \times 2)$ — 30; Associative
9. 8×1 — 8; Identity
10. $(3 \times 2) \times 4$ — 24; Associative
11. 6×3 — 18; Commutative
12. 0×4 — 0; Zero
13. $5 \times (3 \times 3)$ — 45; Associative
14. 7×4 — 28; Commutative
15. $9 \times (2 \times 3)$ — 54; Associative