REVIEW: Distributive Property

Name _____

Key Concept and Vocabulary

Distributive Property

Distribute.

$3(4 + 6) = 3 \cdot 4 + 3 \cdot 6$

$4(7 - 2) = 4 \cdot 7 - 4 \cdot 2$

Visual Model

$2(3 + 5) \quad = \quad 2 \cdot 3 \quad + \quad 2 \cdot 5$

Skill Examples

1. $3(9 + 4) = 3 \cdot 9 + 3 \cdot 4$

2. $7(10 - 3) = 7 \cdot 10 - 7 \cdot 3$

3. $6 \cdot 8 + 6 \cdot 7 = 6(8 + 7)$

4. $12 \cdot 9 - 12 \cdot 2 = 12(9 - 2)$

5. $5(2 + 5 + 3) = 5 \cdot 2 + 5 \cdot 5 + 5 \cdot 3$

Application Example

6. You buy 3 hot dogs for $1.25 each and 3 sodas for $0.75 each. Find the total cost.

$$3(1.25) + 3(0.75) = 3(1.25 + 0.75)$$
$$= 3(2.00)$$
$$= 6$$

The total cost is $6.00.

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Check your answers at BigIdeasMath.com.

Use the Distributive Property to rewrite the expression.

7. $3(4 + 5) = \underline{3 \cdot 4 + 3 \cdot 5}$ **8.** $5(8 - 3) = \underline{5 \cdot 8 - 5 \cdot 3}$ **9.** $9(11 + 7) = \underline{9 \cdot 11 + 9 \cdot 7}$

10. $8(27 - 9) = \underline{8 \cdot 27 - 8 \cdot 9}$ **11.** $6(17 - 7) = \underline{6 \cdot 17 - 6 \cdot 7}$ **12.** $4(7 + 3 + 2) = \underline{4 \cdot 7 + 4 \cdot 3 + 4 \cdot 2}$

13. $5 \cdot 7 + 5 \cdot 3 \; \underline{5(7 + 3)}$ **14.** $2 \cdot 9 - 2 \cdot 6 = \underline{2(9 - 6)}$ **15.** $7 \cdot 4 + 7 \cdot 8 = \underline{7(4 + 8)}$

16.

$2(2 + 3) = 2 \cdot 2 + 2 \cdot 3$

17.

$3(3 + 2) = 3 \cdot 3 + 3 \cdot 2$

18. **MENTAL MATH** You buy 5 hot dogs for $1.29 each and 5 sodas for $0.71 each. Show how you can use mental math to find the total cost.

$5(1.29) + 5(0.71) = 5(1.29 + 0.71) = 5(2.00) = \$10$

19. **EXTENSION** Does the Distributive Property apply to a combination of addition *and* subtraction? Decide using the expression $3(7 + 5 - 4)$.

yes; $3(7 + 5 - 4) = 3(8) = 24$ and

$3(7 + 5 - 4) = 3 \cdot 7 + 3 \cdot 5 - 3 \cdot 4 = 21 + 15 - 12 = 24$