TOPIC: THE DISTRIBUTIVE PROPERTY

The Distributive Property

◆ The *distributive property* allows us to *distribute* multiplication into parenthesis.

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New **Distributive Property of Multiplication**

$$a(b + c) = \underline{}b + \underline{}c$$

Using Order of Operations: $2(4 + 5) = 2(9) =$

Using Distributive Property $2(4 + 5) =$

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◆ Since multiplication is commutative, $a(b + c) = (b + c)\underline{}$.

EXAMPLE   Use the distributive property to write each expression without parenthesis.

(A)

$\quad 4(x - 8)$

(B)

$\quad (4x + 2y - 7z)3$

TOPIC: THE DISTRIBUTIVE PROPERTY

PRACTICE   Use the distributive property to simplify the expression.

(**A**) $7(3 + 2)$

(**B**) $-4(6 - 1)$

EXAMPLE   Use the distributive property to simplify the expression.

$-(2x - 3y + 4 - z)$

TOPIC: THE DISTRIBUTIVE PROPERTY

PRACTICE   Use the distributive property to simplify the expression.

(A)
$$\frac{1}{4}(8 - 12)$$

(B)
$$0.6(-8x + 2.5)$$

(C)
$$x(x + 5)$$

(D)
$$x(2x + 7y)$$

EXAMPLE   Apply your knowledge of the distributive property to write the following *with* parenthesis.

(A)
$$91 \cdot m + 91 \cdot n = \underline{\quad}(m + n)$$

(B)
$$4 \cdot x - 4 \cdot y$$