

Distributive Property of Multiplication

The distributive property allows us to simplify an expression by taking out the parentheses.

Distributive Property

1. Multiply the term just outside the brackets by every term inside of the brackets.

$$b(a + y) = ba + by$$

$$b(a - y) = ba - by$$

$$-b(a + y) = -ba - by$$

$$-b(a - y) = -ba + by$$

Examples

$$3(2x + 1)$$

$$6x + 3$$

$$2(4x - 2)$$

$$8x - 4$$

$$-4(5a + 3)$$

$$-20a - 12$$

$$-5(10b - 6)$$

$$-50b + 30$$

Name: _____

Date: _____

Practice:

Simplify the following expressions

$$-(4a + 43)$$

$$-4a - 43$$

$$3(4a + b) - (4a - 3b + 4)$$

$$12a + 3b - 4a + 3b - 4$$

$$12a - 4a + 3b + 3b - 4$$

$$8a + 6b - 4$$

$$(m - 2 + 3n)6 - 4(m + 1)$$

$$6m - 12 + 18n - 4m - 4$$

$$6m - 4m + 18n - 12 - 4$$

$$2m + 18n - 16$$