The Distributive Property

Here are four forms of the <u>distributive property</u>:

$a(b + c) = ab + ac$

$a(b - c) = ab - ac$

$(b + c)a = ba + ca$

$(b - c)a = ba - ca$

Example 1:   Use the distributive property to write the expression without parenthesis.

$2(x+4)$

$2x+8$

$x(x+4)$

$x^2 + 4x$

$5 -1(n-2)$

$5 - n + 2$

$7 - n$

$-n + 7$

When an expression is written as a sum, the parts ~~tat~~ that are added are the <u>terms</u> of the expression. <u>Like terms</u> are terms in an expression that have the same variable raised to the same power. Numbers are also considered to be like terms. You can use the distributive property to combine like terms.

Example 2: Simplify the expression.

$$-4x + 7x$$

$$3x$$

$$2(x-3) + 4(x-7)$$

$$2x - 6 + 4x - 28$$

$$6x - 34$$

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

$$-x(4-y)$$

$$2x + 2y - 4x + xy$$

$$-2x + 2y + xy$$

Name

Distributive Property

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