Algebra 10-3 Multiplying a Polynomial by a Monomial

Warm-Up

Remember

$x^m \cdot x^n = x^{m+n}$

$(x^m)^n = x^{mn}$

Multiply.

1. $-6x^2 \cdot 3x^3$

$-18x^2x^3$

$-18x^5$

2. $-5x^4 \cdot 3x^3$

$-15x^4 \cdot x^3$

$-15x^7$

3. $3x^2 \cdot 4x^4 \cdot -xy$

$-12x^2 \cdot x^4 \cdot x^1 y$

$-12x^7y$

4. **Give an example of the distributive property.**

A) $2(3x-2) = 6x-4$

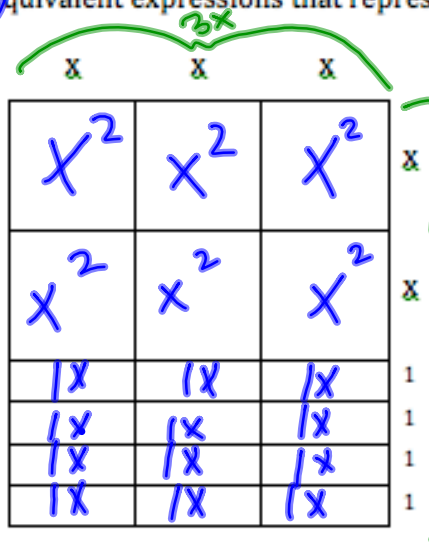
B) $2x^1(3x^1-2) = 6x^2-4x$

Algebra 10-3 Multiplying a Polynomial by a Monomial

Examples

Test!

1. Give 2 equivalent expressions that represent the area of this figure.



$6x^2 + 12x = 3x(2x+4)$

$A = l \times w$

2. Simplify

a. $2y(4y - 6)$

$8y^2 - 12y$

b. $-2x^2(3x^3 - 4x + 5)$

$x^2 \cdot x^1 = x^3$

$-6x^5 + 8x^3 - 10x^2$

c. $4x(5x^2 - x) - 3x$

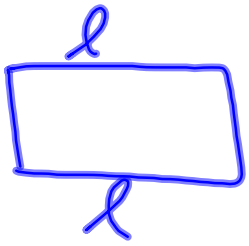
$20x^3 - 4x^2 - 3x$

d. $4b(6b + 3) + a(2a - 4)$

$-1a \cdot -4$

$24b^2 + 12b - 2a^2 + 4a$

3. Suppose the length of a rectangle is l ft. Write 2 equivalent expressions for the area if the rectangle's width is 3 ft. more than 4 times the length.



$4l + 3$

$A = l \cdot w$

$A = l(4l + 3)$

$l(4l + 3) = 4l^2 + 3l$

10-3 #'s 1-23, skip 7 & 13