

Date: _____

Bell work:

- 1) Evaluate the following for $x = (-2)$ and $y = 3$ without simplifying using exponent laws.

$$\frac{(2x^3y)(-3y^2)(4)}{(x^2y^3)(4x^3)(-8)}$$

- 2) Use exponent laws to simplify the expression in question one, then plug in the values for x and y and evaluate.

- 3) Use your coloured pens to simplify each of the following expressions by collecting like terms. Your answers must look like the ones we did in the note!!

a) $-2xy + 3x - 6y + 7y - xy + 9x$

b) $6a - 5b + 8 - 7b - 10a - 12$



Tuesday, October 15, 2019



3.6 & 3.7 The Distributive Property

What do you think that we should do to multiply a binomial by a monomial (example shown below)?

ex/ Multiply $(2x - 5)$ by 2, or evaluate $2(2x - 5)$.

The Distributive Property

A term outside of the bracket must be multiplied by ALL terms inside the bracket.

$$a(x + y) = ax + ay$$

*exponent rules still apply!!

Practice Problems

Expand each of the following using the distributive property.

a) $-3(2x - 7)$ b) $2x(x + 4)$ c) $-3x(x^2 - 2x + 1)$

We can combine what we already know about simplifying polynomial expressions with our new knowledge of the distributive property to **EXPAND AND SIMPLIFY** polynomial expressions. Because BEDMAS always applies, we need to **EXPAND** by using the distributive property before we can **SIMPLIFY** by collecting like terms.

ex/ $-2(xy + 2x - 4) + 5(2xy - x + 1)$

THE DISTRIBUTIVE PROPERTY

$5(m + 12)$

$5(m) + 5(12) = 5 \times m + 5 \times 12$

$5m + 60$

USING THE DISTRIBUTIVE PROPERTY...

What does it mean when we have a polynomial in brackets, but there is not a coefficient explicitly stated in front of it? (See example below)

ex/ Expand and simplify $(x + y - 5) - (2x + 3y - 8)$.

This is what your text book refers to as "adding and subtracting polynomials". This is a true statement, but it is no different from expanding and simplifying polynomial expressions.

Practice Problems:

1) Expand and simplify each of the following expressions.

a) $2(2x + 1) - 3(3x - 1)$

b) $(x^2 - 3x + 5) - 2x(x + 1) - 10$

c) $-(xy - 5x + 2y) + (xy - 4x + y)$

d) $\frac{1}{2}(2x - 4) + \frac{2}{3}(6x - 9)$

e) $(2ab^2 - 3a + 4b) - a(3b^2 + 2b - 9)$

2) What do you think you would do if you had to expand and simplify $(2x + 1)(3x - 2)$?

