

Today's Plan:

Learning Target (standard): I will multiply polynomials and put the product in descending order.

Students will: Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work, take notes over new material and complete practice problems over new concepts.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide examples of new concepts and assign students assessment problems over new concepts.

Assessment: Board work, homework check and homework assignment

Differentiation: Students will work at the board, go over and correct homework at their seats, actively engage in lecture over new concepts, practice new concepts with the aid of other students and the teacher and complete homework assignment.

NAME _____

#88

$y = mx + b$

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5 + 4}{6 - 1} = \frac{9}{5}$
BELL RINGER $m = \frac{9}{5}$

1.) Write an equation in slope-intercept form of the line that passes through the points (1, -4) and (6, 5).

$y = \frac{9}{5}x - \frac{29}{5}$

$y = mx + b$
 $-4 = \frac{9}{5}(1) + b$

$5[-4 = \frac{9}{5} + b]$

$-20 = 9 + 5b$

$-29 = 5b$

$b = -\frac{29}{5}$

2.) Simplify $\frac{1}{2} \cdot \frac{5}{6} = \frac{5}{12}$

3.) Is 5 a solution to the equation $2(x-1) > 10$?

$2(5-1) > 10$

$2(4) > 10$

NO

$8 > 10$

$$20) (mp^3q^3)^2 \cdot 2m^4p^2q^2$$

$$\begin{array}{c} \underline{1} \underline{m^2} \underline{p^6} \underline{q^6} \cdot \underline{2} \underline{m^4} \underline{p^2} \underline{q^2} \\ 2m^6p^8q^8 \end{array}$$

$$22) (2x^2y^4z^4 \cdot 2x^3y^4z^4)^4$$

$$(4x^5y^8z^8)^4$$

$$\boxed{4^4} x^{20} y^{32} z^{32}$$

$$256x^{20}y^{32}z^{32}$$

Simplify.

$$(3x^4y^5)^3 (2x^2y^3)^4$$

$$\boxed{3^3} x^{12} y^{15} \cdot \boxed{2^4} x^8 y^{12}$$

$$\underline{27} x^{12} y^{15} \cdot \underline{16} x^8 y^{12}$$

$$432 x^{20} y^{27}$$

Simplify.

$$(-4x^2y^4)^2 (x^5y^6)^5$$

$$\boxed{(-4)^2} x^4 y^8 \cdot x^{25} y^{30}$$

$$\underline{16} x^4 y^8 \cdot \underline{x^{25} y^{30}}$$

$$16 x^{29} y^{38}$$

Simplify.

$$(-3x^5y^3)^2 (x^3y^7)^5$$

$$\boxed{(-3)^2} x^{10} y^6 \cdot x^{15} y^{35}$$

$$9 \underline{x}^{10} \underline{y}^6 \cdot \underline{x}^{15} \underline{y}^{35}$$

$$9x^{25}y^{41}$$

Simplify.

$$(2x^2y)^3 (2xy^2)^4$$

$$\boxed{2^3} x^6 y^3 \cdot \boxed{2^4} x^4 y^8$$

$$8 \underline{x}^6 \underline{y}^3 \cdot 16 \underline{x}^4 \underline{y}^8$$

$$128x^{10}y^{11}$$

Simplify.

$$\left[\left(x^3 y^2 z^5 \right)^2 \right]^3$$

$$\left[x^6 y^4 z^{10} \right]^3$$

$$x^{18} y^{12} z^{30}$$

Multiplying Polynomials:

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

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

distributive property

$$\underline{2x^3} (x^2 - 4x^5 + 5x^3 - 3x) = 2x^5 - 8x^8 + 10x^6 - 6x^4$$

descending order - alphabetical order from highest exponent to lowest exponent

$$= -8x^8 + 10x^6 + 2x^5 - 6x^4$$

Simplify.

$$\underline{3x}(x^2 - 2x + 4)$$

$$= 3x^3 - 6x^2 + 12x$$

Simplify.

$$(\underline{3x} - \underline{5})(2x + 1)$$

$$6x^2 + \underline{3x} - \underline{10x} - 5$$

$$6x^2 - 7x - 5$$

Simplify.

$$(\underline{a^2} - \underline{3a} + \underline{4})(2a + 3)$$

$$2a^3 + \underline{3a^2} - \underline{6a^2} - \underline{9a} + \underline{8a} + 12$$

$$2a^3 - 3a^2 - a + 12$$

Simplify.

$$(4x - 3)^2$$

Do NOT distribute exponent if there is addition/subtraction

$$(\underline{4x} - \underline{3})(\underline{4x} - \underline{3})$$

$$16x^2 - \underline{12x} - \underline{12x} + 9$$

$$16x^2 - 24x + 9$$

Simplify.

$$(\underline{3xy} + \underline{2})(x^2 - 2xy + 3)$$

$$3x^3y - 6x^2y^2 + \underline{9xy} + 2x^2 - \underline{4xy} + 6$$

$$3x^3y - 6x^2y + 5xy + 2x^2 + 6$$

Simplify.

$$(\underline{3x} + \underline{2})(4x - 1)$$

$$12x^2 - \underline{3x} + \underline{8x} - 2$$

$$12x^2 + 5x - 2$$

Simplify.

$$(\underline{3x^2} + \underline{4x} - \underline{5})(x^3 + 2x^2 + 3x - 1)$$

$$= 3x^5 + \underline{6x^4} + \underline{9x^3} - \underline{3x^2} + \underline{4x^4} + \underline{8x^3} + \underline{12x^2} - \underline{4x} - \underline{5x^3} - \underline{10x^2} - \underline{15x} + \underline{5}$$

$$= 3x^5 + 10x^4 + 12x^3 - x^2 - 19x + 5$$

Assignment:

Multiplying Polynomials

#1-15