

HW: 8.1/11-17 odd, 53, 57

Warm up:

Write in exponential form.

$$x \cdot n \cdot n \cdot n \cdot 4 \cdot x \cdot (-3) \cdot n \cdot x \cdot n$$

$$-12n^5x^3$$

$$2x + 1$$

coefficient variable constant

A diagram showing the binomial expression 2x + 1. The number 2 is labeled as the coefficient, x is labeled as the variable, and 1 is labeled as the constant. Arrows point from each label to its corresponding part of the expression.

Binomial

monomial - 1 term

binomial - 2 terms

trinomial - 3 terms

polynomial - more than 1
term

like terms - have the same variables
to the same powers

$3x$	4.2	$5x^2$
$-5x$	-7	$-8x^2$
$\frac{2}{9}x$	$9\frac{1}{3}$	$\frac{3}{4}x^2$

$$5x + 3x^2$$

$$\underline{4x} + \underline{5x^2} - 8 + \underline{2x} - \underline{12x^2}$$

$$6x - 7x^2 - 8$$

$$-7x^2 + 6x - 8$$

$$\cancel{-6x^3} + \underbrace{3x^2} + \underbrace{x^2} + \cancel{6x^3} - 5$$

$$4x^2 - 5$$

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

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

$$4x^2y + y^3 - 1 + 4xy^2$$

$$4x^2y + 4xy^2 + y^3 - 1$$

$$(3a^2 - 2ab - 2b^2 - 7) - (-a^2 - 5ab + 4b^2 - 2)$$

$$\underline{3a^2} - \underline{2ab} - \underline{2b^2} - \underline{7} + \underline{a^2} + \underline{5ab} - \underline{4b^2} + \underline{2}$$

$$4a^2 + 3ab - 6b^2 - 5$$

$$1) -3x^2 + 7x^2y - x^3 + xy^2 + 4x^3 - 3x^2y$$

$$2) (2p - 7q - 4) + (3q + 2p - 1)$$

$$3) (y^2 - 3y - 5) - (-y^2 - 7y + 4)$$

$$4) (2p^2q - 3pq^2 + q^3) - (-p^2q + q^3)$$

5) Solve.

$$3 - 2x(x - 1) = x(3 - 2x) - (x - 3)$$

$$1) -3x^2 + 7x^2y - x^3 + xy^2 + 4x^3 - 3x^2y$$

$$3x^3 - 3x^2 + 4x^2y + xy^2$$

$$2) (2p - 7q - 4) + (3q + 2p - 1)$$

$$\underline{2p} - \underline{7q} - \underline{4} + \underline{3q} + \underline{2p} - \underline{1}$$

$$4p - 4q - 5$$

$$3) (y^2 - 3y - 5) - (-y^2 - 7y + 4)$$

$$y^2 - 3y - 5 + y^2 + 7y - 4$$

$$2y^2 + 4y - 9$$

$$4) (2p^2q - 3pq^2 + q^3) - (-p^2q + q^3)$$

$$\underline{2p^2q} - 3pq^2 + \cancel{q^3} + \underline{p^2q} - \cancel{q^3}$$

$$\textcircled{3p^2q - 3pq^2}$$

5) Solve.

$$3 - 2x(x - 1) = x(3 - 2x) - (x - 3)$$

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

$$\begin{array}{r} -2x^2 + 2x + 3 = -2x^2 + 2x + 3 \\ + \cancel{2x^2} - \cancel{2x} \qquad \qquad + \cancel{2x^2} - \cancel{2x} \end{array}$$

$$3 = 3$$

infinitely many solutions

CCSS | REASONING The perimeter of the triangle can be represented by the expression $3x^2 - 7x + 2$. Write a polynomial that represents the measure of the third side.



