1. Solve for p: $x = 2p + y$

$$\frac{-y \quad -y}{}$$

$$\frac{x - y}{2} = \frac{2p}{2}$$

$$\boxed{p = \frac{x - y}{2}}$$

2. Graph the following system of inequalities and name one point in the solution.

$$y \geq 5$$

$$y < \frac{4}{3}x + 4$$

3. Simplify:

$$(8n - 3n^4 + 10n^2) - (3n^2 + 11n^4 - 7)$$

$$8n - 3n^4 + 10n^2 - 3n^2 - 11n^4 + 7$$

$$-14n^4 + 7n^2 + 8n + 7$$

Notes Quiz

Identify the type of polynomial and the degree:

1. $3x^2$

2. -7

3. $9x - 3y + z$

4. $x^2 + y^3$

5. $3w^4 - 9w^3 + 6w + 9$

6. $-12g^2 + 15g - 9$

7. k

Combine like terms:

8. $7x^2 - 5x + 10x + 2x^2$

$$9x^2 + 5x$$

9. $(-2c + 4) - (5c + 6)$

$$-2c + 4 - 5c - 6$$
$$-7c - 2$$

10. $b^7 + 3b^4 - 2b + 5b^7 - 7b + 12b^4$

$$6b^7 + 15b^4 - 9b$$

Multiplying Monomials

Rules:
-**Must** have the same base to multiply!!!
-**ADD** the exponents when multiplying!!

Examples:

$3^2(3^5) = 3^7 = 2187$ $3x^2(4x^3) = 12x^5$

$x(x^2)(x^3) = x^6$ $(10e^2)(3g^4)(5eh)$
$$150e^3g^4h$$

$(4abc)(-3a^2b^3c)$ $5xy^2(-3x^3y^2)$
$$-12a^3b^4c^2 \qquad -15x^4y^4$$

Simplify:

$4^3(4^6) = 4^9$

$x^5(x^4)(x^3) = x^{12}$

$(5a^2b^3c)(-4a^5bc^2)$
$-20a^7b^4c^3$

$-5x^6(7x^4)$
$-35x^{10}$

$(7e^3)(5g^2)(8eh^4)$
$280e^4g^2h^4$

$7xy^4(-5x^4y)$
$-35x^5y^5$

Multiplying a monomial and a p

$$5x^2(-7x^4 + 5x^3 - 9)$$

$$-35x^6 + 25x^5 - 45x^2$$

$$3x^3y^2(8xy + 9x - 4y)$$

$$24x^4y^3 + 27x^4y^2 - 12x^3y^3$$

$$-2abc(-6a^2 + 4ab - 6b + 4)$$

$$12a^3bc - 8a^2b^2c + 12ab^2c - 8abc$$

You Try:

1. $5x(3x + 4)$

$15x^2 + 20x$

2. $4x^2y^3(-6xy + 5y - 6)$

$-24x^3y^4 + 20x^2y^4 - 24x^2y^3$

3. $-8ab(-3a^3b^2 - 7ab + b - 5)$

$24a^4b^3 + 56a^2b^2 - 8ab^2 + 40ab$