ALGEBRA – POLYNOMIALS 2

1. For the polynomial $x^2 + 7x - 3$:

    a. identify the terms _____

    b. identify the coefficients of each term _____

    c. name the polynomial _____

2. Evaluate the following:

    a. ½ bh   for b = 3 and h = 10 _____

    b. $x^3 + 2x - 1$ for x = -2 _____

3. Add or subtract as indicated and simplify.

    a. $(3x^2 + x - 1) + (x^2 - 3x + 7)$ _____

    b. $15ab^2 - 8ab + ab - 3ab^2$ _____

    c. $(5w^2 - 2w) - (10w^2 + 3w)$ _____

    d. $(7x + 3y - z) - (7x + 3y + z)$ _____

4. Multiply and simplify.

    a. $(-c^2d)(-2cd^2)$ _____

    b. $3y(5y^2 + y - 7)$ _____

    c. $(x - 5)(3x + 2)$ _____

5. Divide and simplify.

    a. $(12x^2y - 16xy + 4y) \div 4y$ _____

    b. $\dfrac{30cd^2}{-5cd}$ _____

6. Factor the following.

   a. $6x^2 - 3x^2y$ _____

   b. $5ab - 10ac - 15a$ _____

   c. $14a^2b^2 - 7ab^2 + 21a^2b^3$ _____

7. Solve the formula for the variable indicated.
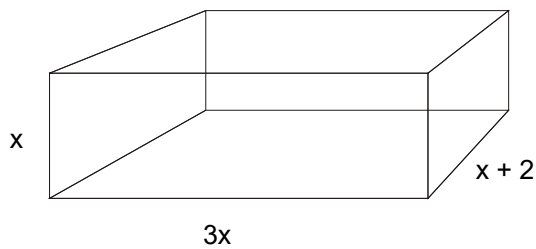
   a. $P = 2L + 2W$ for W _____

   b. $I = Prt$ for t _____

   c. $A = \dfrac{a + b + c}{3}$ for a _____

8. Find the volume of the figure below.

x   x + 2   3x

_____

ANSWER KEY

1. a. x^2, 7x, -3   b. 1, 7   c. trinomial

2. a. 15   b. -13

3. a. $4x^2 - 2x + 6$ b. $12ab^2 - 7ab$ c. $-5w^2 - 5w$ d. $-2z$

4. a. $2c^3d^3$ b. $15y^3 + 3y^2 - 21y$ c. $3x^2 - 13x - 10$

5. a. $3x^2 - 4x + 1$ b. $-6d$

6. a. $3x^2(2 - y)$ b. $5a(b - 2c - 3)$ c. $7ab^2(2a - 1 + 3ab)$

7. a. $W = \dfrac{P - 2L}{2}$ or $W = \dfrac{1}{2}P - L$ b. $t = \dfrac{I}{Pr}$ c. $a = 3A - b - c$

8. $3x^3 + 6x^2$