ALGEBRA – POLYNOMIALS 1

1. For the polynomial $17x^2 – x$:

   a. identify the terms _____

   b. identify the coefficients of each term _____

   c. name the polynomial _____

2. Evaluate the following:

   a. $2b^2 - 5b + 3$ for b = -1 _____

   b. 2L + 2W for L = 7 and W = 9 _____

3. Add or subtract as indicated and simplify.

   a. $10x^2 + 3x - 9 + 2x - 10x^2 + 2$ _____

   b. $(a^3 + 7a + 3) + (5a^3 - 9)$ _____

   c. $5y^2 - (y^2 + y - 1)$ _____

   d. $(12n^3 - 3n) - (6n + 2)$ _____

4. Multiply and simplify.

   a. $-2x(x^2 - 3x +5)$ _____

   b. $(3a^2b^3)(-4a^2b)$ _____

   c. $(2x - 1)(x + 3)$ _____

5. Divide and simplify. (4 marks)

   a. $(-18a^2b^2 + 9ab^2 - 27b^2) \div 9b^2$ _____

   b. $\frac{-4x^3y^2}{-8x^2y^2}$ _____

6. Factor the following.

a. $4m - 2m^2$ _____

b. $x^5 - x^4 + x^3$ _____

c. $18a^2b^3 + 6a^2b^2 - 12a^2b$ _____

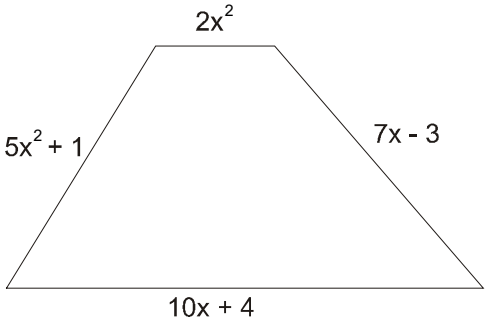
7. Solve the formula for the variable indicated.

a. $A = \frac{1}{2} bh$ for b _____

b. $C = \frac{5}{9}(F - 32)$ for F _____

c. $y = mx + b$ for m _____

8. Find the perimeter of the figure below.



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ANSWER KEY

1. a. $17x^2$, $-x$ b. 17, -1 c. binomial

2. a. 10 b. 32

3. a. $5x - 7$ b. $6a^3 + 7a - 6$
   c. $4y^2 - y + 1$ d. $12n^3 - 9n - 2$

4. a. $-2x^3 + 6x^2 - 10x$ b. $-12a^4b^4$ c. $2x^2 + 5x - 3$

5. a. $-2a^2 + a - 3$ b. $\frac{x}{2}$ or $\frac{1}{2}x$

6. a. $2m(2 - m)$ b. $x^3(x^2 - x + 1)$ c. $6a^2b(3b^2 + b - 2)$

7. a. $b = \frac{2a}{h}$ b. $F = \frac{9}{5}c + 32$ c. $m = \frac{y - b}{x}$

8. $7x^2 + 17x + 2$

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