Math 2 : Unit 2 Review Worksheet for Unit 2 Test Name _____

1. Find the degree of the monomial
a) $3x^4$ b) $5xy^2$ c) $-2x^3y^5$

2. Write the polynomial in standard form. Identify the leading coefficient and classify by # of terms.
a) $-6x + 8x^3$ b) $3x + 5x^2 + 7$

Std. form:
leading coefficient:
classify:

3. Find the sum: $(m^2 - 7m + 5) + (6m^2 - 2m - 1)$

4. Find the difference: $(4n^2 + 2n - 7) - (9n^2 - 5n + 4)$

5. Find the product:
a) $(x+3)(x-7)$ b) $(3a-4)(a-8)$ c) $(x+4)(x^2+3x-5)$

d) $(x+6)^2$ e) $(x-3)^2$ f) $(3x+2)(3x-2)$

6. Factor the polynomial completely
a) $4x^3 + 24x$ b) $a^2 + 5a - 14$ c) $d^2 - 64$

d) $3x^2 - 15x + 12$ e) $m^2 - 24m + 144$ f) $75a^2 - 3$

7. Factor the polynomial by grouping: $x^3 + 2x^2 + 6x + 12$

8. Solve the equation: a) $y(y-5) = 0$ b) $(3p+4)(p-5) = 0$

9. Use factoring and the zero-product property to solve:

a) $5x^2 + x = 0$

b) $x^2 + 6x - 16 = 0$

c) $5x^2 + 17x + 6 = 0$

d) $x^2 + 18x = -32$

10. The equation $A = x^2 + 8x + 16$ represents the area of a square. Write a polynomial that represents the length of one side.

11. The graph shows $y = x^2 - 3x - 10$

Find the x-coordinates where the graph crosses the x-axis.