

## Unit 7 Day 12 HW Unit 7 Study Guide

Name: \_\_\_\_\_

Name the following polynomials according to the **degree** and the **number of terms**.

1.  $3x^4 - 8x + 1$

2.  $7x^2$

3.  $5y^2 - 3y$

4. 11

Add or Subtract the following polynomials.

5.  $(2x^3 - 4x^2 + 7x - 10) + (4x^3 - 2x + 8)$

6.  $(2x^5 - 2x^3 + 9x) - (3x^5 - 7x^4 + 2x^3 - 4x + 1)$

7.  $4x^2(3x^2 - 1x - 2) - (-5x^2 + x - 7)$

Multiply the following expressions. You may need to use the distributive property, FOIL, or a special product pattern. You decide!!

8.  $(x + 5)(x - 3)$

9.  $(3x + 2)(2x - 1)$

10.  $(x + 2)(x^2 - 3x - 7)$

11.  $(x - 2)(x + 2)$

12.  $(x + 6)^2$

13.  $(2x - 5)^2$

Solve each factored expression for x (*hint – Think ZPP*):

$$14. \ 2x(x - 7) = 0$$

$$15. \ (x + 1)(x - 10) = 0$$

$$16. \ (x - 3)(x - 8) = 0$$

$$17. \ (1 - 2x)(x + 12) = 0$$

Factor out the GCF of each expression

$$18. \ 9a^3 + 15a^2$$

$$19. \ 10x^5y^4 + 14x^3y^8 - 2xy$$

$$20. \ 18y^3 + 27y^8$$

$$21. \ -5x + 25x^7 - 15x^3$$

Solve.

$$22. \ x^2 + 2x - 3 = 0$$

$$23. \ x^2 + 3x = 4$$

Solve.

$$24. \ x^2 - 2x - 5 = 2x$$

$$25. \ 2x^2 - 11x - 21 = 0$$

$$26. \ 6x^2 + 5x = 6$$

$$27. \ x^2 + 6x - 28 = 9x$$

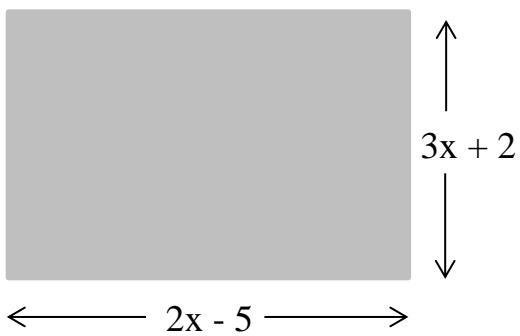
$$28. \ 25c^4 - 4c^2 = 0$$

$$29. \ x^2 - 2x + 1 = 0$$

$$30. \ 18x^3 + 24x^2 + 8x = 0$$

$$31. \ 8c^4 - 18c^2 = 0$$

32. Write a polynomial in standard form that represents the AREA and PERIMETER of the rectangle below.



33) Write a polynomial that represents the area of the shaded area below. (Assume the shapes are rectangles)

