

Name \_\_\_\_\_

Date \_\_\_\_\_

## Advanced Algebra

### Unit 5 Polynomials: Assignment #10

( You will need to do the work on a separate piece of paper)

#### Combine the following polynomials

1)  $(5x^3 + 11x^2 + 26x + 26) - (5x^2 - 40x + 6)$

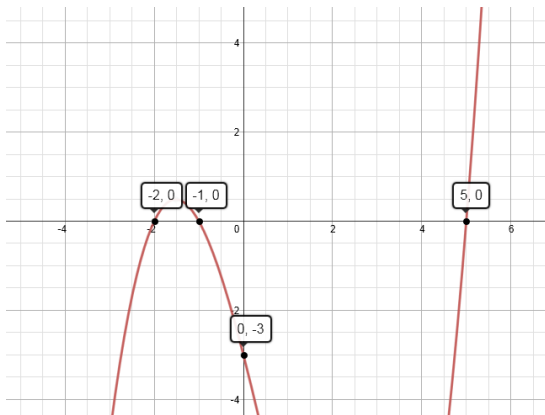
2)  $(-18a + 3a^3 + 9 - 36a^2) - (-3a^2 + 3a)$

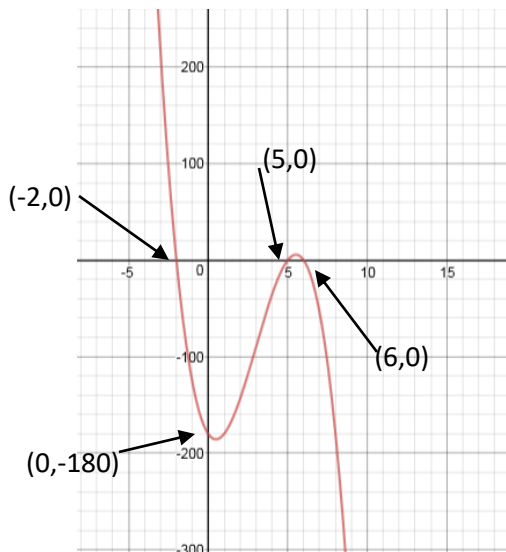
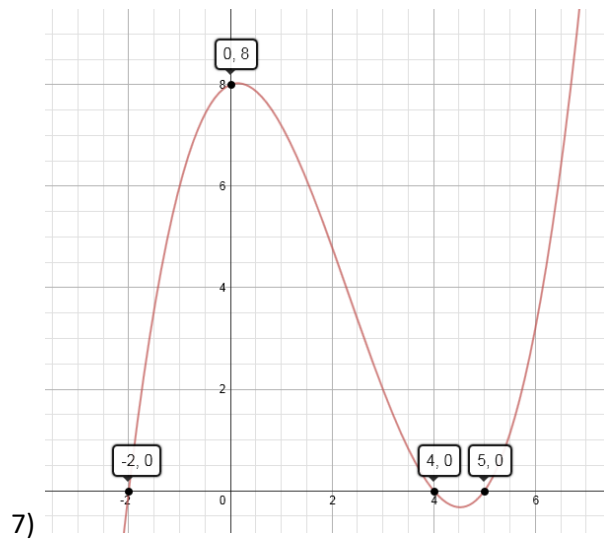
3)  $(a-10)(a^3 + 5a^2 - 6)$

4)  $(v+4)(3v+11)(6v-18)$  Hint: do a box for  $(v+4)$  and  $(3v+11)$  and then make a **new 3 by 2 box**

5)  $3(k^3+2k^2-4)(k+4)(k+5)$  Hint: do a box for  $(k+4)(k+5)$  and then make a **new 3 by 3 box**

#### Write the equations of the following graphs:





**Transform the following into General Form ( Use your box skills)**

8)  $y = 3(x-1)(x+3)(x+8)$

9)  $y = -2(x+2)(x+5)(x-6)$

10)  $y = 5(x-2)(x-3)(x+5)$

$$11) y = -.5(2x+4)(x-6)(x+2)$$

$$12) y = \frac{1}{4} (4x+8)(2x-3)(x+5)$$

**Complete the square for the following problems:**

$$9) y = x^2 + 20x + 94$$

$$10) y = x^2 - 7x + 16$$

$$11) y = 6x^2 - 24x + 147$$

$$12) y = 5x^2 + 8x$$