Unit 4 Day 5 HW **Name: _____**

I. Determine the value of C (number of unit block) that will create a perfect square. Then, write the trinomial as a perfect square.

1. $x^2 - 12x + \_\_\_\_\_$ 2. $x^2 + 15x + \_\_\_\_\_$ 3. $x^2 - 7x + \_\_\_\_\_$ 4. $x^2 + 20x + \_\_\_\_\_$

II. Determine if each quadratic trinomial is a perfect square. If it is, rewrite the expression as a perfect share. If it is not, just write "not a perfect square."

5. $x^2 + 18x + 36$ 6. $x^2 - 14x + 49$ 7. $x^2 + 9x + \frac{81}{4}$

II. The following quadratics are not perfect squares but can be rewritten in an equivalent form as a perfect square with an adjustment. For each problem complete parts a – c.

a. Rewrite each expression as a perfect square with an adjustment – remember this is vertex form!
b. Identify the vertex.
c. Use the table on your graphing calculator or Desmos to verify the expressions are equivalent. Record the values in the tables provided.

8. $x^2 + 6x + 10$ 9. $x^2 + 4x + 3$ 10. $x^2 - 8x + 11$

x	y_1	y_2
-2		
-1		
0		
1		
2		

x	y_1	y_2
-2		
-1		
0		
1		
2		

x	y_1	y_2
-2		
-1		
0		
1		
2		

11. $x^2 - 6x - 2$ 12. $x^2 + 20x - 1$ 13. $x^2 + 5x + 12$

x	y_1	y_2
-2		
-1		
0		
1		
2		

x	y_1	y_2
-2		
-1		
0		
1		
2		

x	y_1	y_2
-2		
-1		
0		
1		
2		