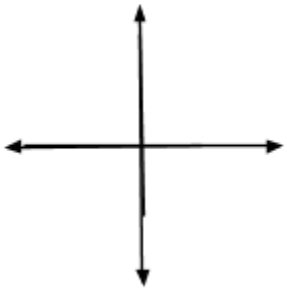
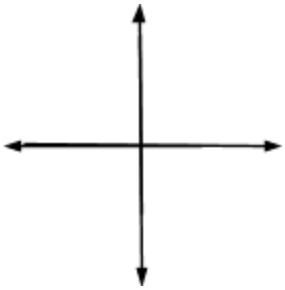
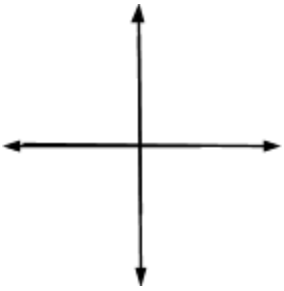
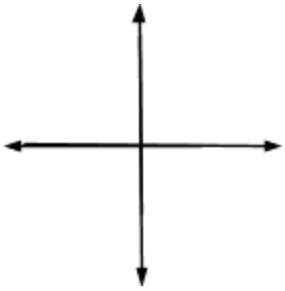
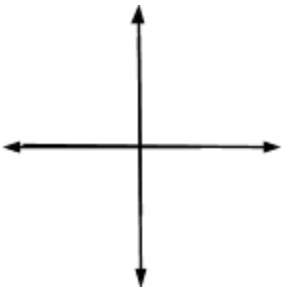
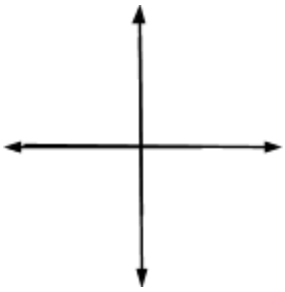
CW#____

Name:_____

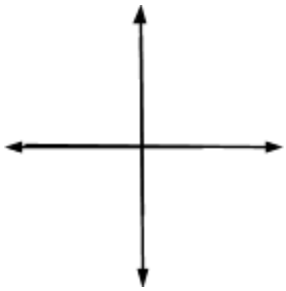
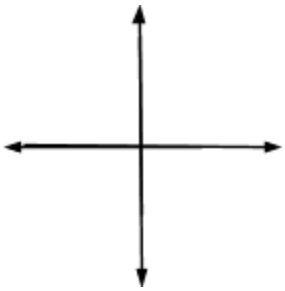
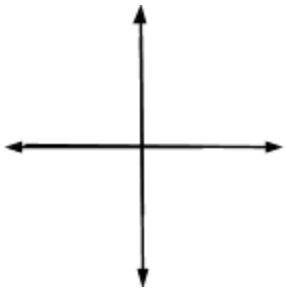
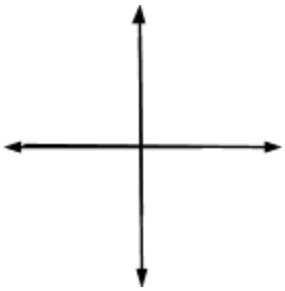
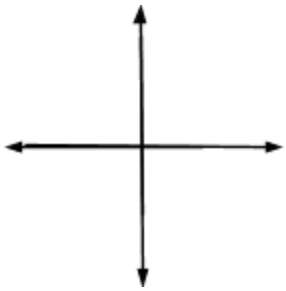
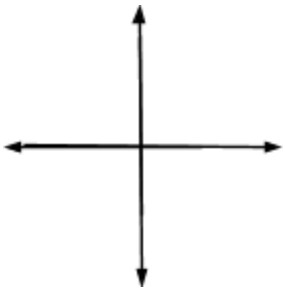
Period: A1 A2 A3 B1 B3

2.1.1 How can I graph it?

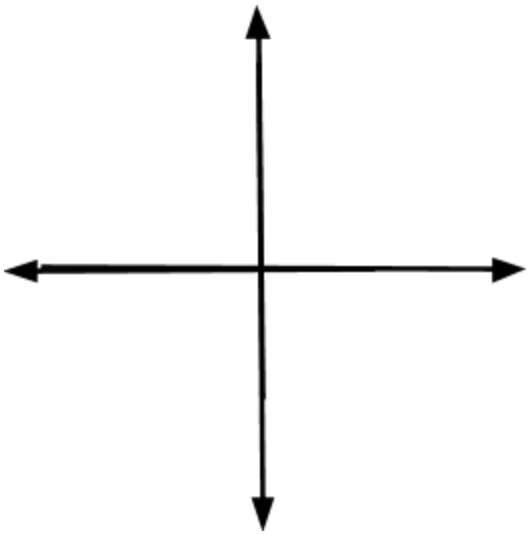
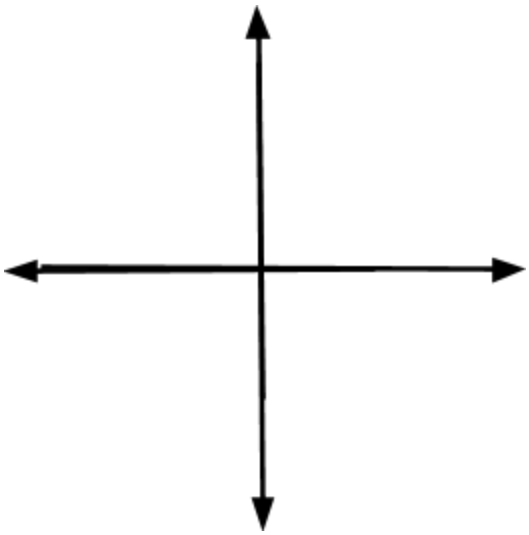
Transforming Quadratic Functions

#2			
Equation	Predicted Graph	Actual Graph	How accurate was your prediction? What mistakes did you make?
$y = (x + 9)^2$			
$y = x^2 + 7$			
$y = 3x^2$			

#2 Continued

Equation	Predicted Graph	Actual Graph	How accurate was your prediction? What mistakes did you make?
$y = \frac{1}{3}(x-1)^2$			
$y = -(x-7)^2 + 6$			
$y = 2(x+3)^2 - 8$			

What information did you need to make a sketch without using a table? Explain clearly.

#3		
Equation	Graph	What information did you need to make a graph without using a table? How did you find that information from the equation?
a. $y = (x - 7)^2 - 2$		
b. $y = 0.5(x + 3)^2 + 1$		

#4 How can you make a graph without a table when the equation is given in standard form ($y = ax^2 + bx + c$)? Consider the function $y = 2x^2 + 4x - 30$.

a. What is the orientation of the graph? That is, does it open upward or open downward? How could you change the equation to make the graph open the opposite way?

b. What is the stretch factor of the graph? Justify your answer.

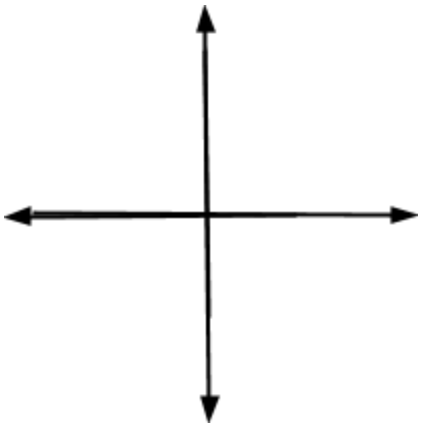
c.

i. What are the x-intercepts of the parabola?

ii. Where is the vertex located in relation to the x-intercepts? Can you use this relationship to find the x-coordinate of the vertex?

iii. Use the x-coordinate of the vertex to find its y-coordinate.

d. Sketch a graph of $y = 2x^2 + 4x - 30$.



Equation in Graphing Form:

e. Verify that both forms of your equation are equivalent.