Intermediate Algebra **Name:**_____

4.1 Graphing Review **Period:**_____ **Score:**_____

1. Explain how to find the vertex in standard form: $y = ax^2 + bx + c$

2. Explain how to find the vertex in factored form: $y = a(x - m)(x - n)$

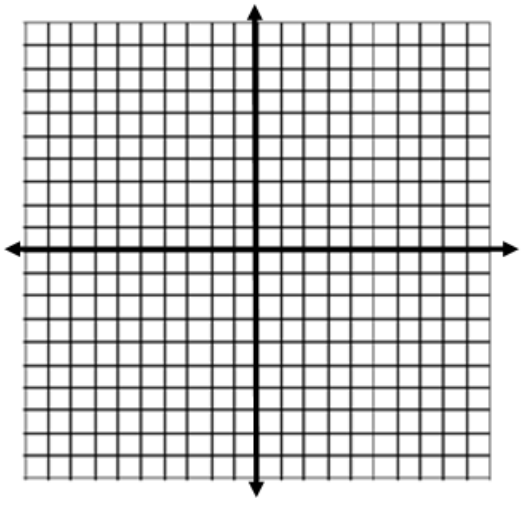
3. Explain how to find the vertex in vertex form: $y = a(x - h)^2 + k$

4. How do you find the y-intercept of a graph?

5. $y = 2x^2 + 4x - 6$

   A) Opens: _____
   B) Vertex: _____ Min or Max?
   C) Axis of Symmetry: _____
   D) X-intercepts? _____
   E) y – intercept?_____
   F) Domain: _____ Range: _____
   G) How many solutions? __ List them:_____

X	Y



6. $y = -(x-3)(x+1)$

A) Opens: _____

B) Vertex: _____ Min or Max?

C) Axis of Symmetry: _____

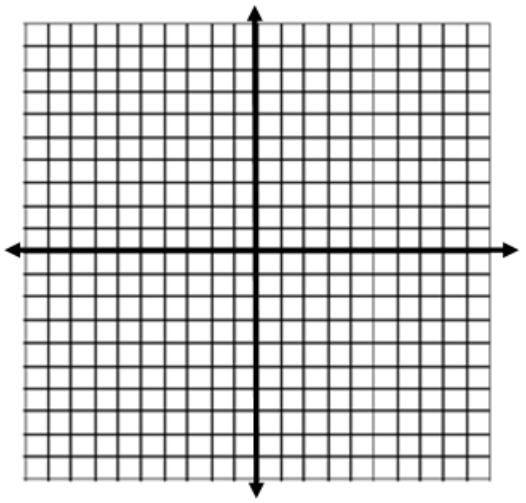
D) X-intercepts? _____

E) y – intercept?_____

F) Domain: _____ Range: _____

G) How many solutions? __ List them:_____

X	Y



7. $y = \frac{1}{2}(x+3)^2 + 2$

A) Opens: _____

B) Vertex: _____ Min or Max?

C) Axis of Symmetry: _____

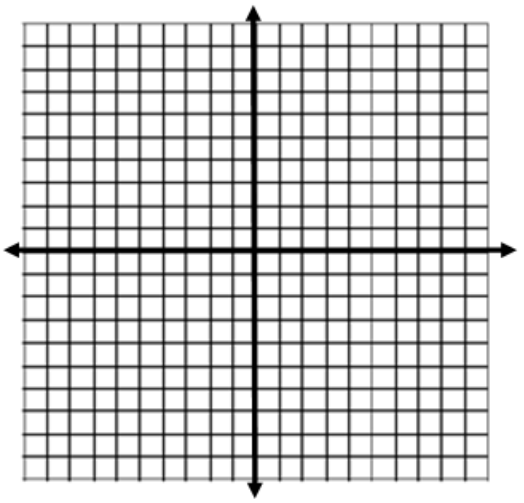
D) X-intercepts? _____

E) y – intercept?_____

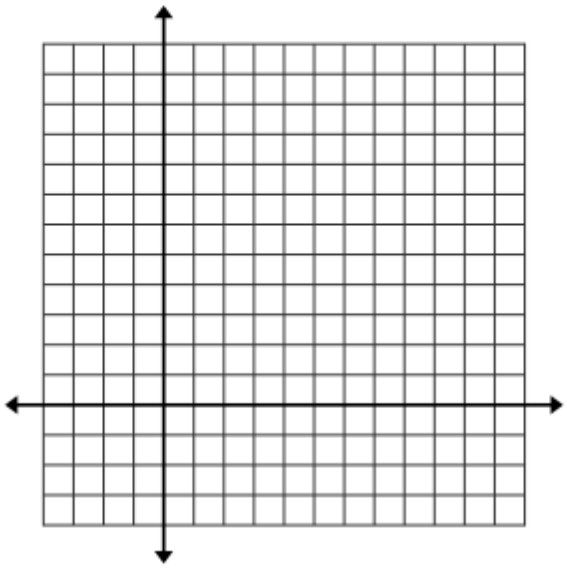
F) Domain: _____ Range: _____

G) How many solutions? __ List them:_____

X	Y



8. While playing basketball this weekend Frank shoots an air-ball. The height h in feet of the ball is given by $h(x) = -16(t-1)^2 + 24$ where t is time in seconds.



a) How long will it take the ball to hit the ground?

b) What is the maximum height of the ball?

c) What are the domain and range of the function?

d) How does the situation restrict the domain and range?