Name: Date: Period:

Practice Worksheet: Graphing Quadratic Functions in Standard Form

1] For any quadratic of the form $y= ax^2 + c$, the axis of symmetry is always the line _____.

2] If the axis of symmetry of a quadratic is $x= 2$ and $(-1, 3)$ is on the graph, then the point (____, ____) must also be on the graph.

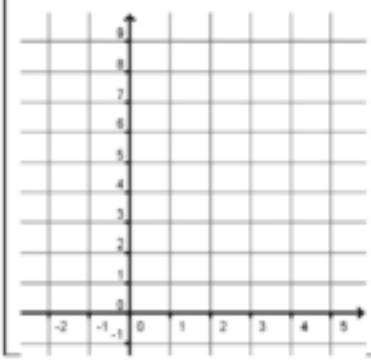
3] For any quadratic of the form $y= ax^2 + c$, the y-intercept is always the same point as the _____.

4] The graph of $y = 2x^2 + 4x+ 3$ passes through the point (1, _____) and (-1, _____).

For #5-12, label the axis of symmetry, vertex, y-intercept, and at least three more points on the graph.

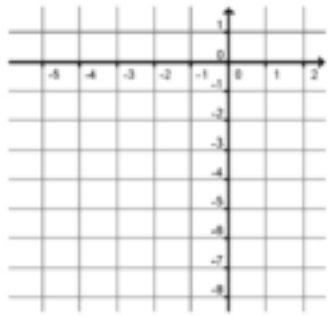
5] $y = x^2 - 4x+ 8$
a = b = c =
Opens up or down?
Is vertex a max or min?
y-intercept:
Axis of Symmetry is x=_____

Vertex: (_____, _____)



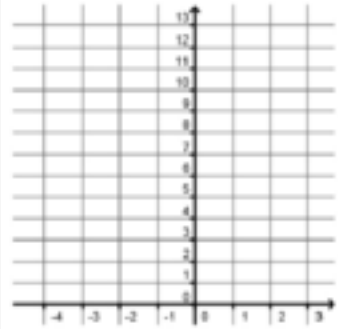
6] $y = 2x^2 + 8x$
a = b = c =
Opens up or down?
Is vertex a max or min?
y-intercept:
Axis of Symmetry is x=_____

Vertex: (_____, _____)



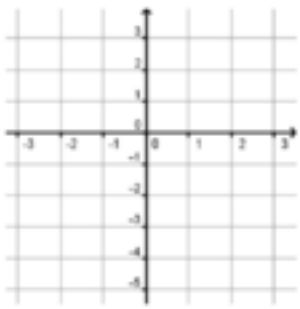
7] $y = -3x^2 - 12x+ 1$
a = b = c =
Opens up or down?
Is vertex a max or min?
y-intercept:
Axis of Symmetry is x=_____

Vertex: (_____, _____)



8] $y=-\frac{3}{2}x^2 + 3$
a = b = c =
Opens up or down?
Is vertex a max or min?
y-intercept: (0, ___)
Axis of Symmetry
is x=_____

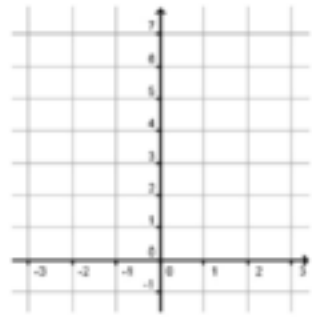
Vertex: (_____, _____)



Find the coordinates (2, _____) and (-2, _____) to guide the shape of the parabola.

9] $y= 2x^2 - 1$
a = b = c =
Opens up or down?
Is vertex a max or min?
y-intercept: (0, ___)
Axis of Symmetry
is x=_____

Vertex: (_____, _____)



Find the coordinates (2, _____) and (-2, _____) to guide the shape of the parabola.