Name _____ **Period** _____ **Date** _____

Use the Vertex Formula

Consider the graph of $y = -2x^2 - 8x - 2$

a. Write the equation of the axis of symmetry.

$a =$ _____ $b =$ _____ $c =$ _____

$x = -\dfrac{b}{2a}$

$x =$

b. Find the coordinates of the vertex.

$y = -2(\quad)^2 - 8(\quad) - 2$

$y =$

The coordinates of the vertex are (,   )

c. Identify the vertex as a maximum or minimum.

This parabola has a _____

d. Graph the function.

X	y

Use the axis of symmetry from part *a* as the middle value