

Typical Quadratic Graphs

For $y = x^2$ ($A = 1$)

From the vertex, over one up one
over two up four
over three up nine

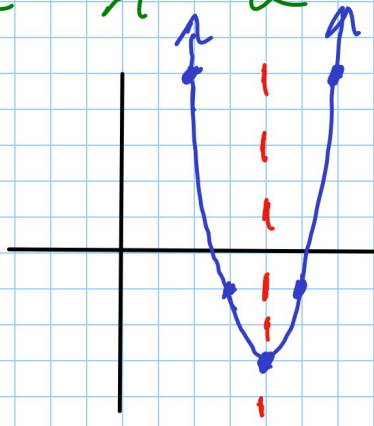
For $y = 2x^2$ ($A = 2$)

From the vertex, over one up 2
over two up 8
over three up 18

For $y = \frac{1}{2}x^2$ ($A = \frac{1}{2}$)

From the vertex, over one up $\frac{1}{2}$
over two up 2
over four up 8

Graph it $A = 2$ and vertex $(4, -3)$



$$\text{AoS} = \frac{-B}{2A}$$

$$4 = \frac{-B}{2(2)}$$

$$4 = \frac{-B}{4}$$

$$B = -16$$