5.

Solution

Since the line of symmetry will always be a vertical line in all of our parabolas, the general formula for the line will be $p = q$

where q is the first coordinate of the vertex, and it is equal: $-\frac{2}{2(3)} = -\frac{1}{3}$

So, the axis of symmetry is: $p = -\frac{1}{3}$