

1.

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 $f = m$

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

So, the axis of symmetry is: $f = -\frac{1}{2}$