

Standard Form

1. Put in Standard form

$$f(x) = ax^2 + bx + c$$

2. Identify a, b, c

3. Find the vertex

$$\text{vertex } x = \frac{-b}{2a}$$

4. plug in the x -from step
into the equation

5. Plot 2 pts to the
left & 2 points to the
right

Standard form

$$f(x) = ax^2 + bx + c$$

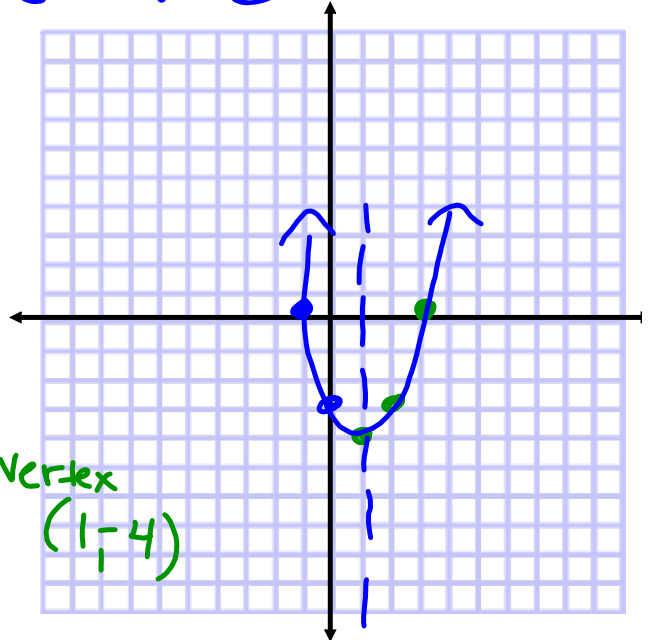
ex $y = x^2 - 2x - 3$

$$a = 1 \quad b = -2 \quad c = -3$$

$$x = \frac{-b}{2a} = \frac{2}{2(1)} = \frac{2}{2} = 1$$

$$y = (1)^2 - 2(1) - 3 = -4 \quad \text{Vertex } (1, -4)$$

x	y	
2	-3	$(2)^2 - 2(2) - 3$
3	0	$(3)^2 - 2(3) - 3$



$$y = -x^2 + 4x - 3$$

$$a = -1 \quad b = 4 \quad c = -3$$

$$x = \frac{-b}{2a} = \frac{-4}{2(-1)} = 2$$

$$y = -(2)^2 + 4(2) - 3 \quad \text{Vertex } (2, 1)$$

$$-4 + 8 - 3 = 1$$

x	y
1	0
0	-3

$$0 \quad - (1)^2 + 4(1) - 3$$

$$-3 \quad - (0)^2 + 4(0) - 3$$

