

Convert each equation to vertex form and then graph the equation.

$$y = a(x-h)^2 + k$$

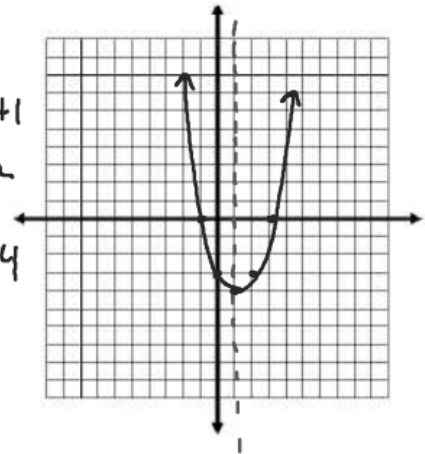
1. $y = x^2 - 2x - 3$

$$y + 3 = x^2 - 2x + 1$$

Vertex Form $y = (x-1)^2 - 4$

$$y + 4 = (x-1)^2$$

$$y = (x-1)^2 - 4$$



Maximum or Minimum

Vertex $(1, -4)$

y-intercept $(0, -3)$

AOS $x = 1$

Domain $(-\infty, \infty)$

x-intercepts $(3, 0)$ $(-1, 0)$

Range $[-4, \infty)$

Intervals of Increasing $(1, \infty)$

Intervals of Decreasing $(-\infty, 1)$

$$0 = (x-1)^2 - 4$$

$$\sqrt{4} = \sqrt{(x-1)^2}$$

$$\pm 2 = x - 1$$

$$x = 1 \pm 2$$

$$1 + 2 = 3$$

$$1 - 2 = -1$$

2. $y = x^2 + 4x - 12$

Vertex Form _____

Maximum or Minimum _____

Vertex _____

y-intercept _____

AOS _____

Domain _____

x-intercepts _____

Range _____

Intervals of Increasing _____

Intervals of Decreasing _____

