

11-7-18

Examples

1. $y = x^2 + 4x + 3$

A.O.S. = $x = \frac{-b}{2a} = \frac{-4}{2(1)} = \frac{-4}{2} = -2$

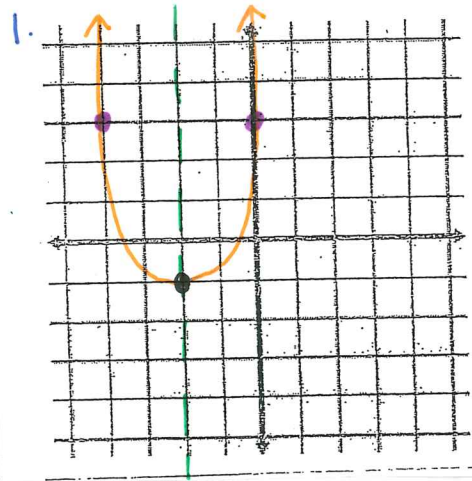
$x = -2$

vertex $x = y = (-2)^2 + 4(-2) + 3$
 $= 4 - 8 + 3$
 $= -1$

$(-2, -1)$

y-int = $y = 0^2 + 4(0) + 3$

$y = 3$
 $(0, 3)$



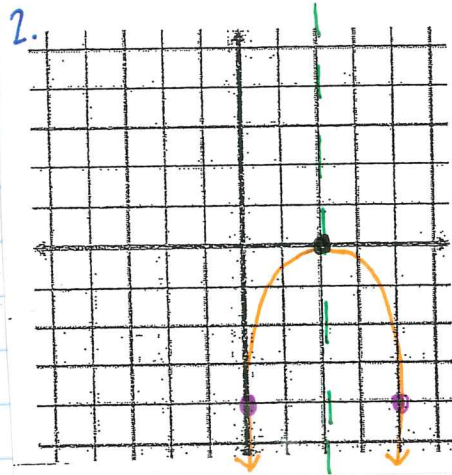
2. $y = -x^2 + 4x - 4$

A.O.S. $x = \frac{-b}{2a} = \frac{-4}{2(-1)} = \frac{-4}{-2} = 2$

$x = 2$

vertex $y = -(2)^2 + 4(2) - 4$
 $= -4 + 8 - 4$
 $= 0$ $(2, 0)$

y-int $y = -0^2 + 4(0) - 4$
 $y = -4$ $(0, -4)$



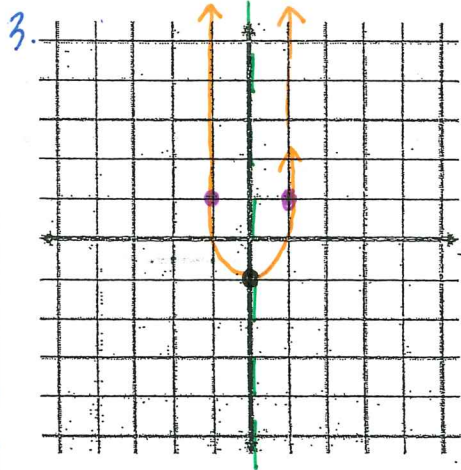
3. $y = 2x^2 - 1$

A.O.S. $x = \frac{0}{2(2)} = 0$ $x = 0$

vertex $y = 2(0)^2 - 1$
 $y = -1$ $(0, -1)$

Another point: $x = 1$

$y = 2(1)^2 - 1$
 $y = 1$ $(1, 1)$



A.O.S.

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

$$x = \frac{-(-6)}{2(1)} = \frac{6}{2} = 3$$

$$x = 3$$

Vertex

$$y = 3^2 - 6(3) + 9$$

$$= 9 - 18 + 9$$

$$= 0$$

$$(3, 0)$$

A.O.S.

Put 0 in for x

and solve for y

y

$$y = 0^2 - 6(0) + 9$$

$$y = 9$$

$$(0, 9)$$

* If the y-int

is on the A.O.S.,

pick another

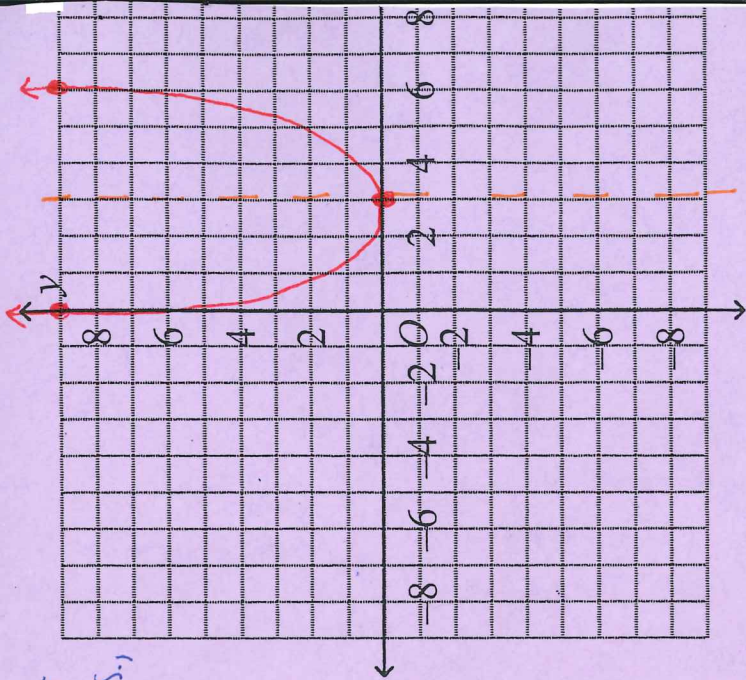
for x and

put into the

equation to

solve for y.

$$\text{ex: } x = 1$$



$$y = x^2 - 6x + 9$$