

Vertex Form:

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

vertex:  $(h, k)$

## Steps

1. Find the vertex  $(h, k)$   
\* switch the sign of  $h$
2. Find the axis of symmetry + draw it
3. Little T-table. Pick 2  $x$ 's + find the  $y$ 's

$$g(x) = (x + 3)^2 - 2$$

1. vertex  
 $(-3, -2)$

2. AOS  
 $x = -3$

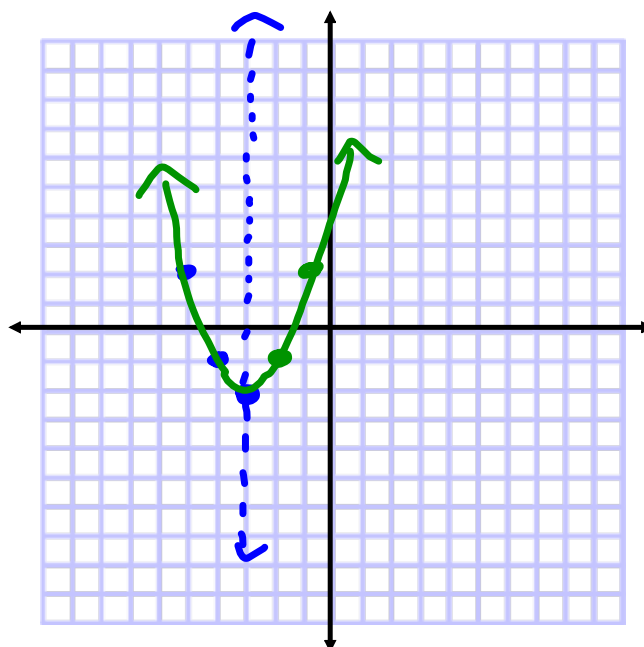
3.

X	y
-3	-2
-4	-1
-5	2

$$(x+3)^2 - 2$$

$$(-4+3)^2 - 2$$

$$(-5+3)^2 - 2$$



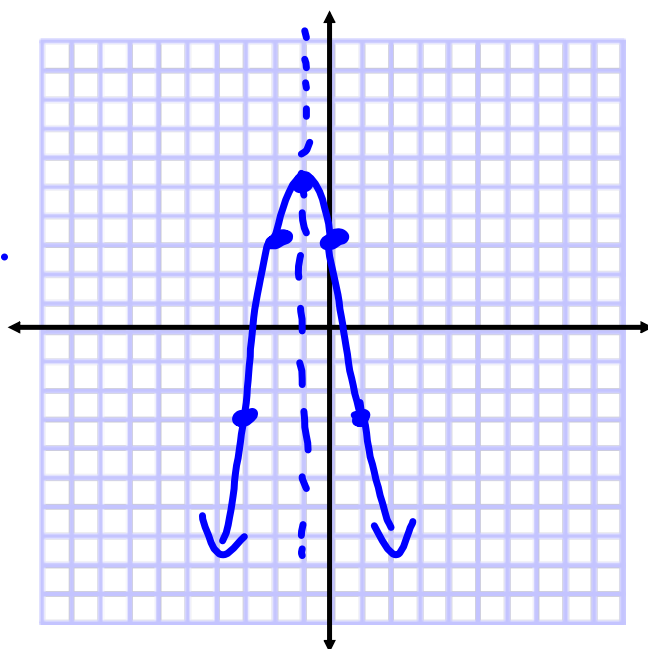
$$g(x) = -2(x+1)^2 + 5$$

Vertex:

$(-1, 5)$

$x = -1$  A.O.S.

$x$	$y$
-1	5
-2	3
-3	3



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

Vertex

$2, -6$

x	y
2	-6
4	-4
6	2

