

Vertex form:

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

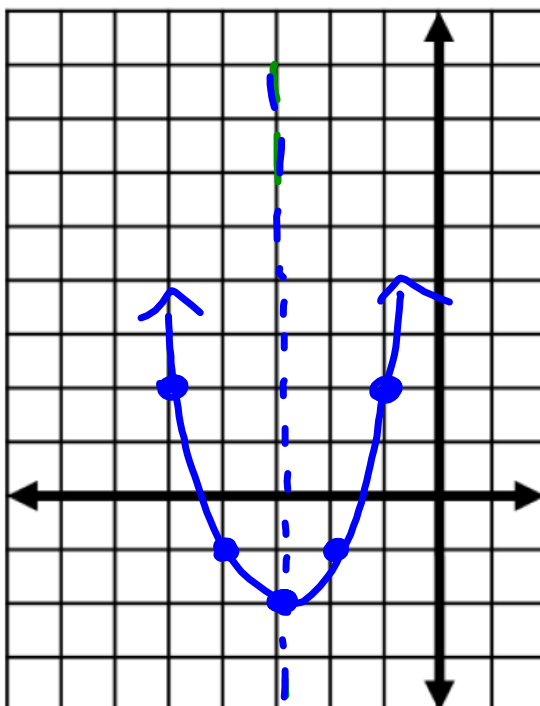
vertex:  $(h, k)$

1. Find vertex  $(h, k)$   
\*switch the sign of  $h$
2. Find  $i$  & draw the axis of symmetry
3. Pick 2 points  $i$  & find the  $y$ 's (little t-table)

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

vertex:  $(-3, -2)$

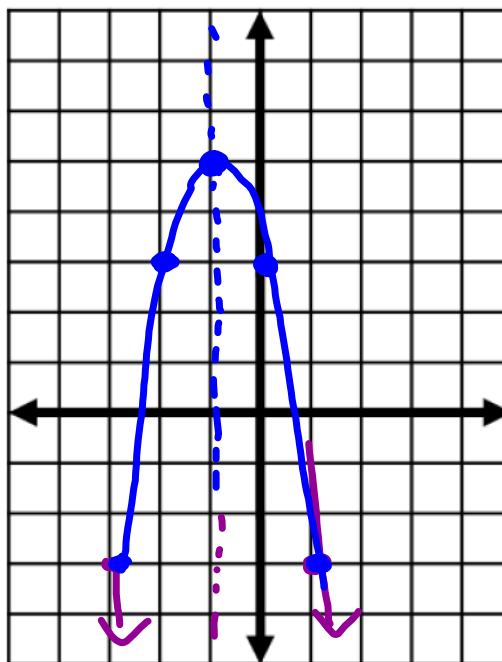
X	y
-3	-2
-2	-1 $(-2+3)^2 - 2$
-1	2 $(-1+3)^2 - 2$



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

Vertex:  $(-1, 5)$

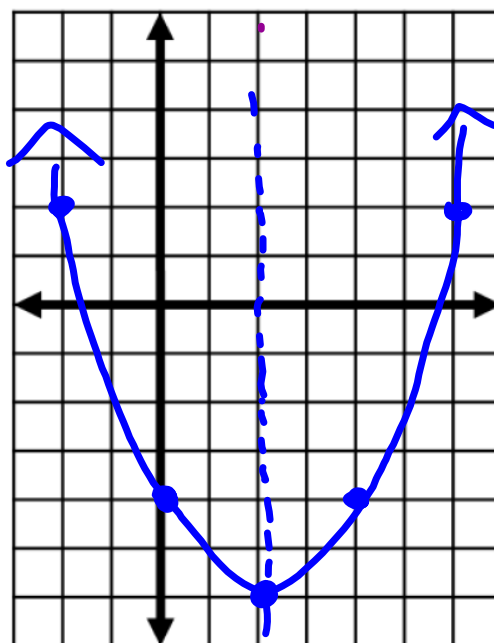
x	y	
-1	5	
0	3	$-2(0+1)^2+5$
1	-3	$-2(1+1)^2+5$



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

vertex: (2, -6)

x	y
2	-6
3	
4	-4
6	2



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

Stretch/shrink  
up/down ↗

up/down  
↑

Reflect  
Across the  
x-axis ↙

left/right  
opposite  
↓