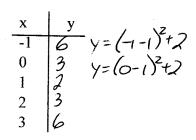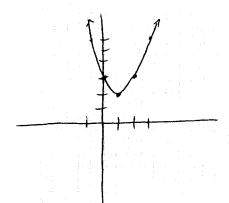To graph quadratic equations we can use a table of values. Complete the following table of values and graph $y = (x - 1)^2 + 2$ on the grid provided.

x	y
-1	6
0	3
1	2
2	3
3	6

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

$y = (0 - 1)^2 + 2$

What is the vertex of the above graph? $(1, 2)$

Is there a pattern to help us graph quadratics?

Yes

Instead of using a table of values we can:

Step 1: State and Graph the vertex.

Step 2: From the vertex go to the right __1__ and up __1__, and right __2__ and up __4__ and repeat on the left side of the vertex.

Example 1: Graph the following quadratic equations.

a) $y = (x - 4)^2 - 1$ V: $(4, -1)$ (b) $y = (x + 5)^2$ V: $(-5, 0)$