

How do they differ?

Alex was asked to graph the equation $y = (x + 1)^2$,
and Morgan was asked to graph the equation $y = (x - 1)^2$.

Alex's way

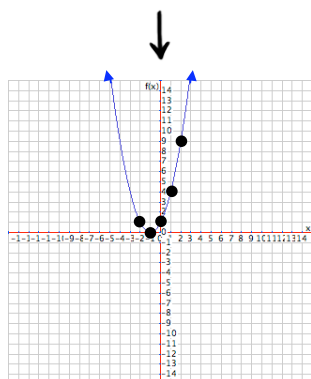
Morgan's way

I created a table of values.

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

x	y
-2	1
-1	0
0	1
1	4
2	9

I graphed the points and connected them to draw my parabola.

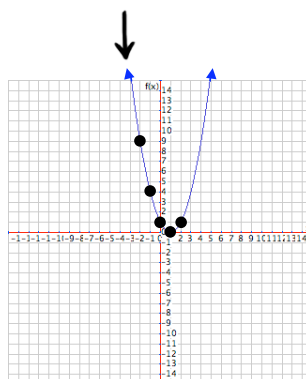


$$y = (x - 1)^2$$

x	y
-2	9
-1	4
0	1
1	0
2	1

I created a table of values.

I graphed the points and connected them to draw my parabola.



- * How did Alex graph the parabola given by his equation? How did Morgan graph the parabola given by her equation?
- * What are some similarities and differences between Alex's and Morgan's problems?
- * What are some similarities and differences between Alex's and Morgan's graphs?
- * How does adding or subtracting a constant to x^2 affect the graph of a quadratic function?
- * If the equation were changed to $y = (x - 6)^2$, what do you think the graph would look like?