Graphing quadratics 4.3.17

Welcome

Get out the sheets from friday.
$y = x^2$ It takes every x term and squares it. As you can see in the first table
So as you can see zero squared is 0. One squared is 1 and two squared is 4. Same with the negatives.

And we can see the equations $y = -x^2$ Takes all the y points in the first table and flips it. Any time there is a negative x squared the graph should be and n.

The vertical shift moves the graph up and down
Then if we look at the c term if it is positive the standard graph is moved up that numbers of units. If it is negative then it is moved down that number of units. The reason this happens is because the c term takes the y value from the equation $y = x^2$ and moves it up and down that many units.

Graphs that are perfect squares
When a graph that is a perfect square for example $y = (x - 3)^2$ That means the standard parabola would be shifted 3 units in the opposite direction. Show this on the graph. If you want to calculate the points use the points 2 more and 2 less than 3 also include 3.

Steepness.
When the a value is between -1 and 1 the graph is wider than normal. And number less than -1 or more than 1 the graph will be steeper. If a is 2 you would double all the y values. If is was one half, you would half all the y-value points.

http://www.coolmath.com/algebra/11-graphing-quadratics-parabolas/05-graphing-parabolas-part-4-04

If time allows have students practice different problems