

Go to <https://iblog.dearbornschools.org/moynanmath/mslutsie/>
Click on the link called "GeoGebra"

Exploring Vertex Form

Use the link provided in the lesson to answer the following questions related to the Vertex Form of a parabola. Answer all questions in complete sentences.

1. What effect does the value of a have on the graph? Explain all observations.
2. What is the equation of the parabola when $a = 1$, $h = 0$, and $k = 0$?
 $f(x) = (x -)^2 +$
3. What effect does the value of h have on the graph? Explain your observations.
4. What effect does the value of k have on the graph? Explain your observations.
5. When h is negative, there is a minus-negative in the middle of the parentheses. How will this be simplified? Why will this be simplified?

Go back to my blog and click on the video called "Vertex Form" and watch the video. If you do not have headphones, click on the cc button and read the captions

1. Write down the equation for vertex form

2. Which letters represent the vertex? Write them as a coordinate (x,y)

3. In the practice problem, $y=3(x-2)^2+1$, what is the vertex?

4. Complete the sentence:

The vertex is a _____ if the a is positive and the vertex is a _____ if the a is negative.

5. What is the axis of symmetry? Which letter in the equation tells us where the axis of symmetry is located?