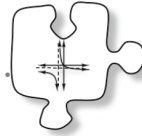


2.2.2 What is the significance of (h, k) ?.....
Describing (h, k) for Each Family of Functions**#51** Think about the parent function for parabolas, $y=x^2$.

a. Write the equation of a parabola that will be the same as the parent graph, but shifted 4 units to the right.

b. Does the strategy you used to translate parabolas horizontally also work for other parent graphs? Justify your answer.

c. You have learned that the graphing form for a parabola is $y=a(x-h)^2+k$. To translate the graph of $y=x^2$ right h units, you replaced x^2 with $(x-h)^2$. Work with your team to justify why replacing x with $(x-h)$ translates a graph to the right. Think about multiple representations as you discuss this and be prepared to share your ideas with the class.

#52 With your team, brainstorm a list of all of the families of functions that you have learned about so far.

Stop Here: Do Family of Functions Notes

#54 What is the parent function for the graph of a line? Use what you have learned about transforming parent graphs to write the graphing form of a line.

a. Use this graphing form of a line to write the equation of a line with slope $\frac{4}{5}$ that passes through the point (3,9).

b. Write the equation of a line that passes through the points (-1, 5) and (8, -2) in graphing form.