Precalculus Honors

Transforming Parabolas Notes

Name: _____

Date: _____

Period: A1 A2 A3 B1 B3

G___

Investigate the impact of the **parameters**, a, h, and k, in the graphing form of a quadratic function, $y = a(x - h)^2 + k$:

Which parameter translates the graph of $y = x^2$ horizontally (right or left)? What values of the parameter translate $y = x^2$ to the left? To the right?

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Which parameter stretches or compresses the graph of $y = x^2$ vertically? What values of the parameter stretch the graph? What values compress the graph?

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What values of which parameter will reflect the graph of $y = x^2$ across the x-axis?

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Which parameter translates the graph of $y = x^2$ vertically (up or down)? What values of the parameter translate $y = x^2$ up? Down? Why?

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Are there any points on the graph of a parabola that have a connection to specific parameters in the equation? Explain.

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