**Graphing Quadratic Functions**

In Lesson 3.3 we learned how to translate a function. What other types of functions could we translate? Go to Desmos.com and click the start graphing button.

1. Graph and fill in the table and graph below.

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| *x* | *y* |
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1. Where is the lowest point of the graph located?
2. For what value of *x* does…

? ? ? ?

What do you notice?

1. Use your knowledge from previous lessons to graph each of the following functions **without Desmos.** When you are done, check your graphs in Desmos and describe how the graph has transformed from the parent function, ?
2. y = (x – 1)2 b. y = x2 – 4 y = (x – 1)2 - 4

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Vertex: Vertex: Vertex:

Axis of Symmetry: Axis of Symmetry: Axis of Symmetry:

Transformation: Transformation: Transformation:

Lesson 3.4 – Translations and the Quadratic Family

Important ideas:

**Check Your Understanding**









