**Activity 2.1.3b: Stretch It! Part Two**

**Part 1: Investigating Vertical Stretch/Compression**

1. Type x^2 into the input box and press enter.
2. Click the red button to explore the graph of .
3. Move the slider to change the value of , or enter values into the input box.
4. Make a conjecture about how the value of transforms the graph of *f*(*x*) to the graph of *g*(*x*), when is on the “outside” of the function.
5. Does your conjecture hold if ? If not, modify your conjecture.
6. Does your conjecture hold if ? If not, modify your conjecture.
7. Does your conjecture hold if ? If not, modify your conjecture.
8. Does your conjecture still hold if ? If not, modify your conjecture.

**Part 2: Investigating Horizontal Stretch/Compression**

1. Type x^2 into the input box and press enter.
2. Click the blue button to explore the graph of .
3. Move the slider to change the value of or enter values into the input box.
4. Make a conjecture about how the value of transforms the graph of to the graph of , when is on the “inside” of the function.
5. Does your conjecture hold for ? If not, modify your conjecture.
6. Does your conjecture hold for ? If not, modify your conjecture.
7. Does your conjecture hold if ? If not, modify your conjecture.
8. Does your conjecture still hold if ? If not, modify your conjecture.