GSE Algebra 1 **7.6 – linear shifts** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A line is going to shift very similar to a quadratic.

Let’s look at what we have.

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| ***PARENT GRAPH***  x-int: y-int: | How do we move?  x-int: y-int: |
| How do we move?  x-int: y-int: | How do we move?  x-int: y-int: |
| How do we move?  x-int: y-int: | How do we move?  x-int: y-int: |
| How do we move?  x-int: y-int: | How do we move?  x-int: y-int: |

Compare linear to quadratics. How are these similar? How are they different?

What happens to a line when there is a number higher than 1 for a slope?

What happens to a line when there is a number lower than 1 for a slope?

Write the equations for the following specific scenarios.

1. A quadratic that has been shifted 1 unit to the right and 5 units down.
2. A line that has been reflected and moved up 6 units.
3. A line that has been vertically stretched by a factor of 4 and moved left 4 units.
4. A quadratic that has been reflected over the x-axis, vertically shrunk by ¼ and moved down 6 units.
5. A quadratic that has been moved 4 units left and 9 units up.
6. A line that has been translated 6 units right and 3 units down.
7. A quadratic that has been vertically stretched by a factor of 7 and moved 3 units right.
8. A line that has been horizontally stretched by .
9. A line that has been reflected, vertically stretched by a factor of 7 and down 9 units.