

**You need 3 sheets of paper.
If you want graph paper to graph
your classwork later, go ahead and
get that from me as well.**

**You DO NOT need your calculator
today!**

Class work:

Graph the following linear functions and describe the transformations that have taken place from the parent function $y = x$.

1. $y = 3x - 4$

2. $y = \frac{1}{2}x + 2$

3. $y = -x - 1$

4. $y = -2x$

5. $y = (x + 1) + 3$

Home Work

Graph the following linear functions and describe the transformations that have taken place from the parent function $y = x$.

1. $y = \frac{2}{3}x - 4$

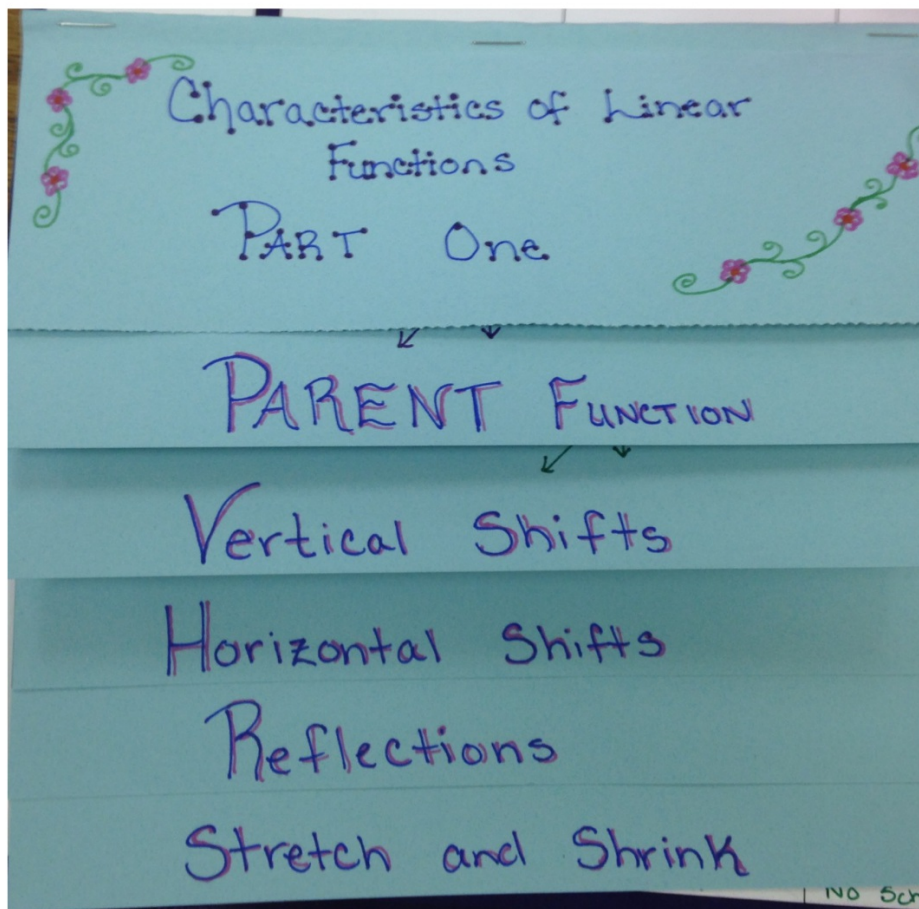
2. $y = -2x + 5$

3. $y = \frac{3}{5}x + 1$

4. $y = -(x - 1) + 2$

5. $y = (x + 2) - 2$

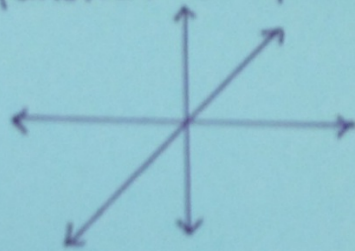
Flip Book: Cover Page



Page 1

→ A parent function is the most basic form of any function.

→ The parent linear function is $y = x$.



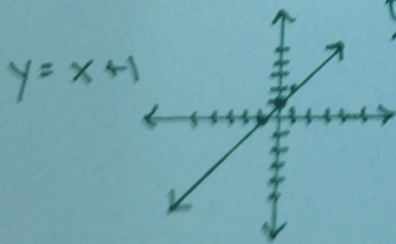
PARENT FUNCTION

Page 2

→ A vertical shift moves the graph up or down on the y-axis.

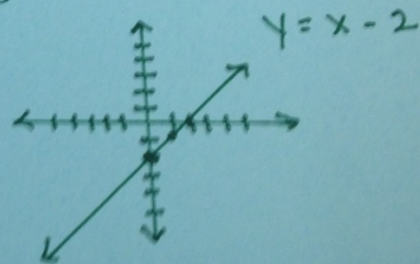
What does it look like?

Shift Up
 $y = x + b$



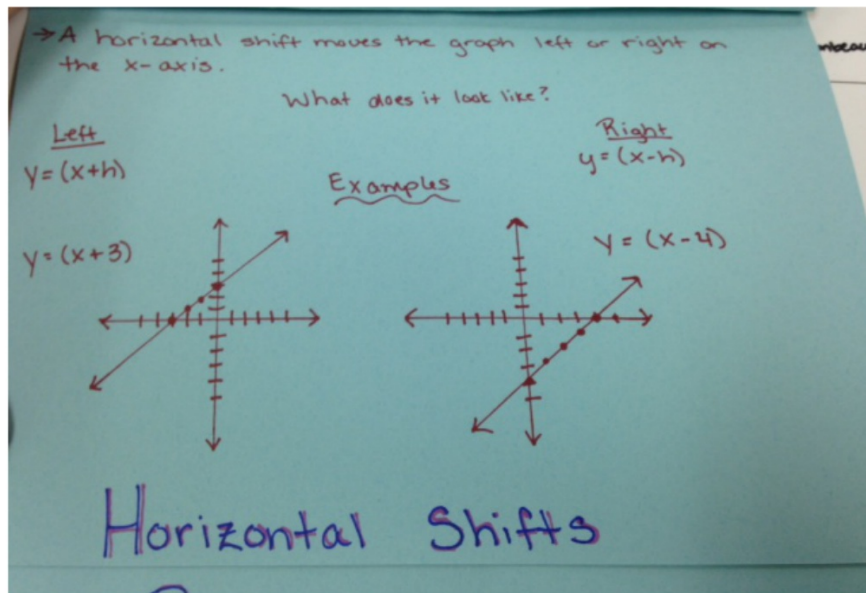
Examples

Shift Down
 $y = x - b$



Vertical Shifts

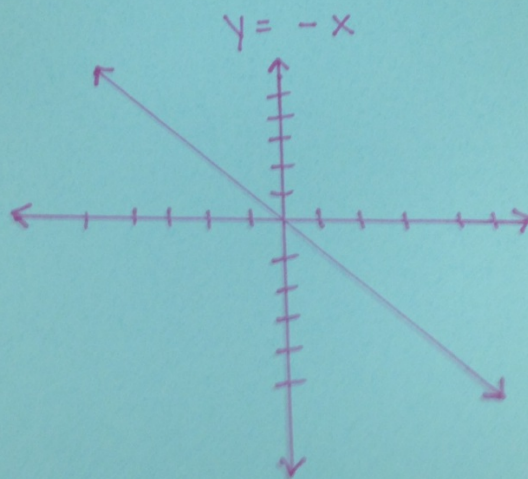
Page 3



Page 4

→ A reflection, or flip, is when the graph is reflected across the y-axis or the x-axis.

What does it look like?

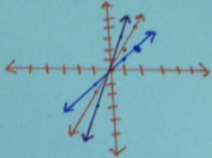


Reflections

Page 5

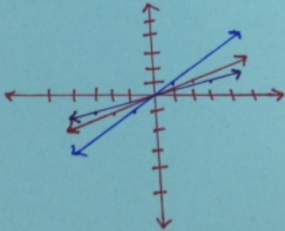
→ A stretch happens when the slope is a whole number. This makes the graph much closer to the y-axis.

Example: $y = x$
 $y = 2x$
 $y = 3x$



→ A shrink happens when the slope is a fraction. This makes the graph much closer to the x-axis.

Example: $y = x$
 $y = \frac{1}{2}x$
 $y = \frac{1}{3}x$



Stretch and Shrink