

Thursday 8/18/16

Please take

9 graphs

scissors

9 info sheets

glue stick

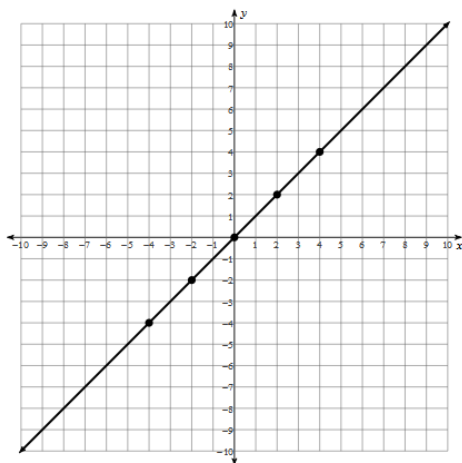
We will create our "Parent Functions" book!

(so get out those too!)

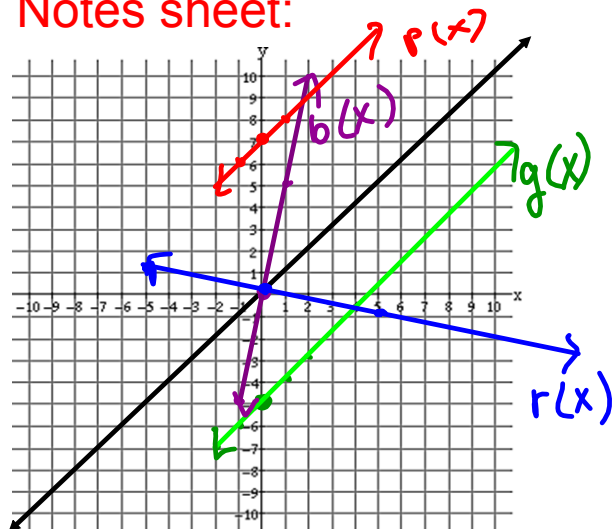
PF book!

Parent Function: Linear

$$f(x) = x$$

*relative max: none*relative min: noneincreasing intervals: $(-\infty, \infty)$ decreasing intervals: none*domain: $(-\infty, \infty)$ *range: $(-\infty, \infty)$ end behavior: $x \rightarrow \infty$ $f(x) \rightarrow$ ∞ $x \rightarrow -\infty$ $f(x) \rightarrow$ $-\infty$

Notes sheet:

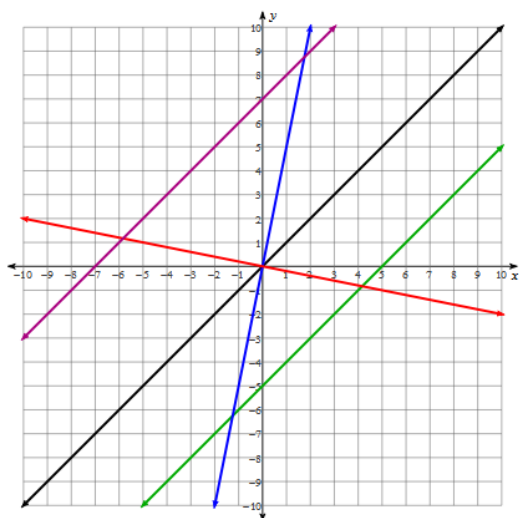


$$g(x) = x - 5$$

$$b(x) = 5x$$

$$r(x) = -\frac{1}{5}x$$

$$p(x) = x + 7$$



$$g(x) = x - 5$$

down 5

$$b(x) = 5x$$

5 times steeper

$$r(x) = -\frac{1}{5}x$$

$$p(x) = x + 7$$

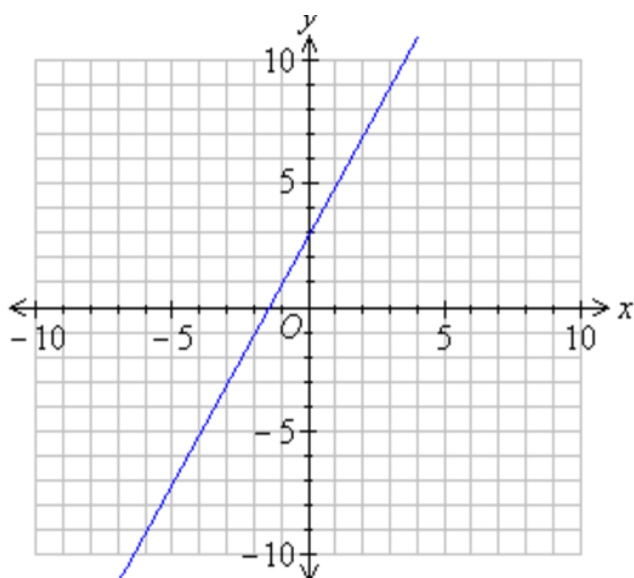
Flipped
1/5 as steep

up 7

$$L(x) = \text{-flippedsteep}(x) \pm \text{up/down}$$



You will need yesterday's notesheet
and your parent function book



Warm-up

Think-Pair-Share

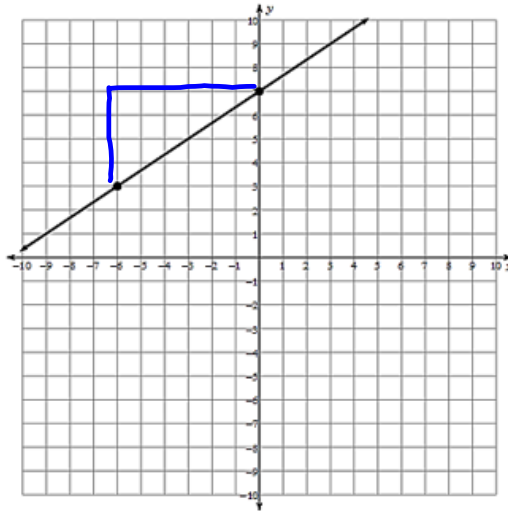
What's the equation of
the line? Think and
then discuss with the
person next to you

Warm-Up

Name the parent function of the graph and then write the equation.

Parent Function: $f(x) = x$

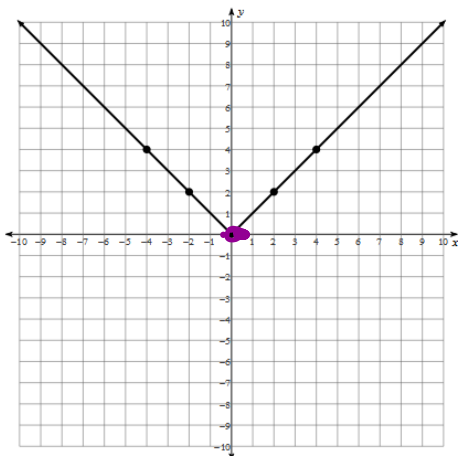
$f(x) =$ $\frac{2}{3}x + 7$



PF BOOK

Parent Function: **Absolute Value**

$f(x) = |x|$



relative max: none

relative min: (0, 0)

increasing intervals: (0, ∞)

decreasing intervals: (-∞, 0)

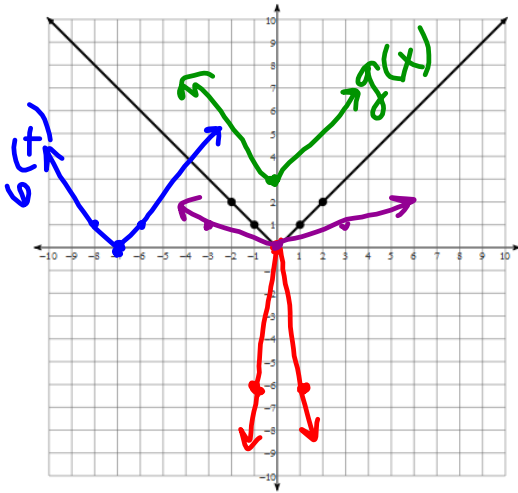
~~domain:~~ (-∞, ∞)

range: [0, ∞)

end behavior: $x \rightarrow \infty \quad f(x) \rightarrow \infty$

$x \rightarrow -\infty \quad f(x) \rightarrow \infty$

Notes sheet:

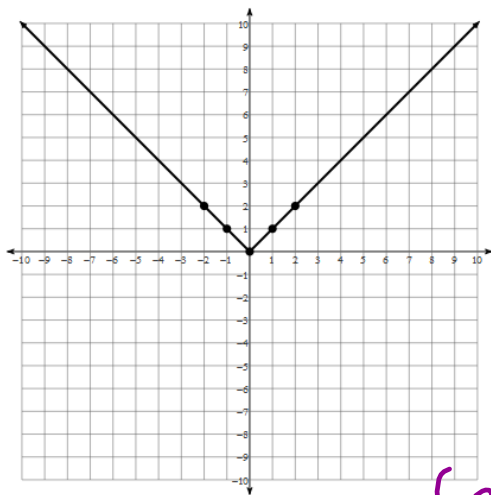


$$g(x) = |x| + 3$$

$$b(x) = |x + 7|$$

$$r(x) = -6|x|$$

$$p(x) = \frac{1}{3}|x|$$



$$g(x) = |x| + 3$$

up 3

$$b(x) = |x + 7|$$

left 7

$$r(x) = -6|x|$$

$$p(x) = \frac{1}{3}|x|$$

Flipped
Stretch Factor: 6

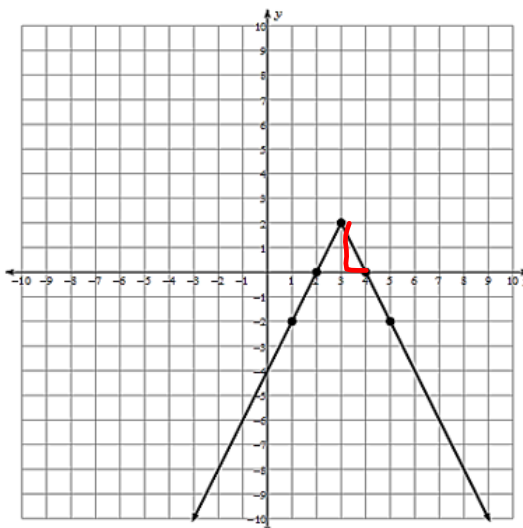
Stretch Factor: 1/3

$A(x) =$ flipped stretched $|x \pm$ 6 left/right $| \pm$ 6 up/down

Use the descriptions to graph the function and write the equation of the function.

Parent Function: $f(x) = |x|$

$f(x) = -2|x-3| + 2$



Homework!

Linear and Abs. Value PRACTICE

