TUESDAY, JANUARY 22, 2019

- Warm-up
  - Evaluate each expression for the given value:

    $|x|$ *for x = 9* $|9| = 9$

    $|x|$ *for x = -9* $|-9| = 9$

    $|x + 1|$ *for x = 9* $|9 + 1| = |10| = 10$

    $|x + 1|$ *for x = -9* $|-9 + 1| = |-8| = 8$

- Piecewise-Defined Linear Functions
  At the Supermarket
  Lesson 8-5
  Transforming the Absolute Value Parent Function

> **Objectives**:
> **Content**: I will graph absolute value functions.
> **Social**: I will use technology to examine patterns.
> **Language**: I will write my conclusions clearly using correct vocabulary.

Lesson 8-5
Transforming the Absolute Value Parent Functions page 143

- Instructions:
  - tear pages 143-147 out of your book and store your book under your desk
  - get a chromebook and go to desmos on google chrome

- Goal:
  - get through The lesson 8-5 practice before the end of 6th period

Objectives:
Content: I will graph absolute value functions.
Social: I will use technology to examine patterns.
Language: I will write my conclusions clearly using correct vocabulary.

Conclude lesson 8-5

- Vertical Transformations:

$$f(x) = |x| + k$$

positive = up ↑
negative = down ↓

Bright Yellow Unit Sheet
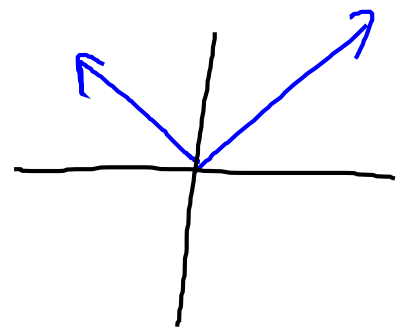
- Vertical Stretch:

magnitude (bigger/smaller)

$$f(x) = k|x|$$

if k is negative reflects over x
if k >1 more steep
if <1 more wide

Parent function:

$$f(x) = |x|$$

- Horizontal Transformations:

←——→

$$f(x) = |x + k|$$

positive = left ←
negative = right →

backwards ``

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Activity 8 Practice – page 149

- On your own paper - individually

linear function

$f(x) = mx + b$

m — slope, rate of change

$$\frac{\Delta y}{\Delta x}$$

b — y intercept $(x = 0, y = ?)$

Domain
input
x's

Range
output
y's

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