

Warmup 9/22<sup>2</sup>

Created by Mr. Lischwe

1)

$$\frac{x - 5}{3} - 1 = x$$

2) Find the rule!

x	y
0	7
1	11
2	15
3	19
4	23

3) **Early finishers:** try to figure out how the problem in the date works.

## CHECK HOMEWORK

## Table of Contents

p. 8 Rate of Change

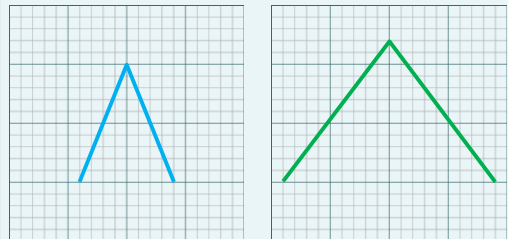
p. 9 **Slope****Objective:**

- Be able to identify the slope (rate of change) of a **line!**

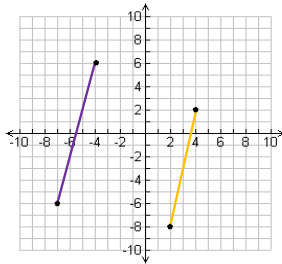
Which roof is steeper???



Which roof is steeper?



Which line is steeper?

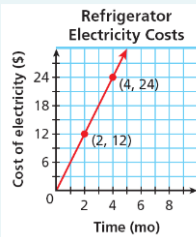


**Finding Slope from a Graph:**

- $\frac{\text{change in } y}{\text{change in } x}$

- (Also known as  $\frac{\text{rise}}{\text{run}}$ )

The graph shows the average electricity costs (in dollars) for operating a refrigerator for several months. Find the slope of the line. Then tell what the slope represents.



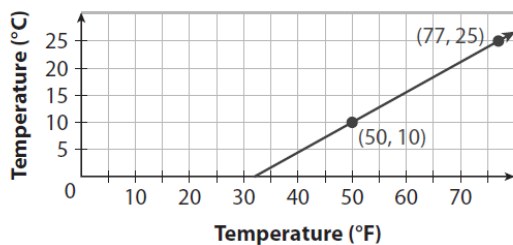
Step 2 Tell what the slope represents.

In this situation  $y$  represents the cost of electricity and  $x$  represents time.

So slope represents  $\frac{\text{change in cost}}{\text{change in time}}$  in units of  $\frac{\text{cost in dollars}}{\text{months}}$ .

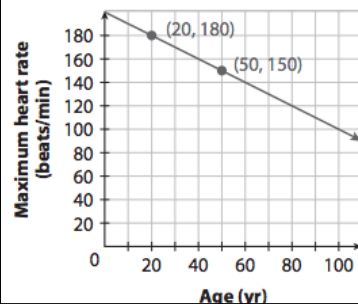
A slope of 6 mean the cost of running the refrigerator is a rate of 6 dollars per month.

Find and interpret the slope.

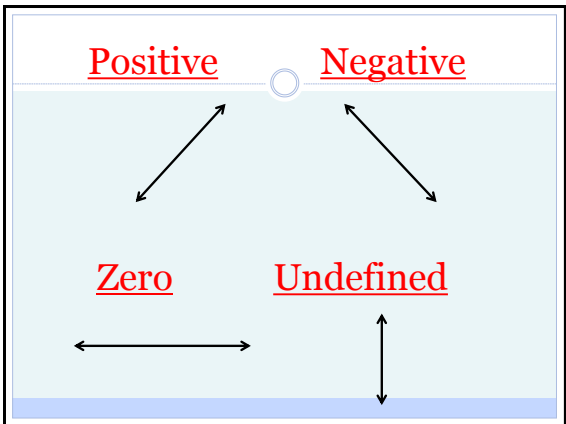
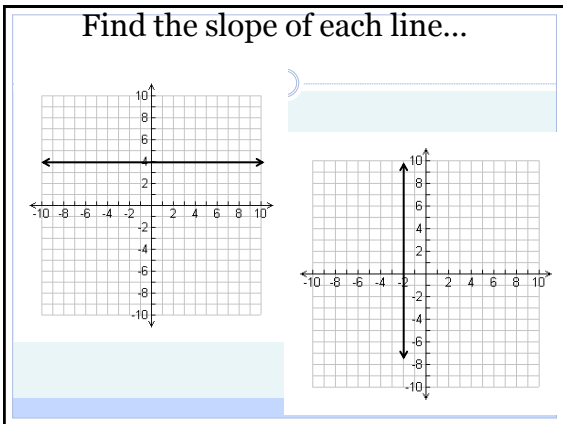
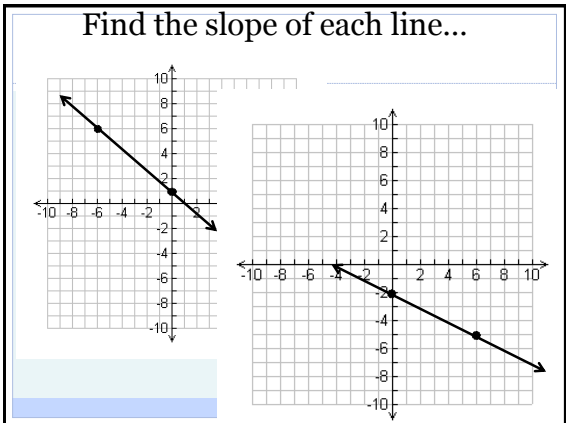
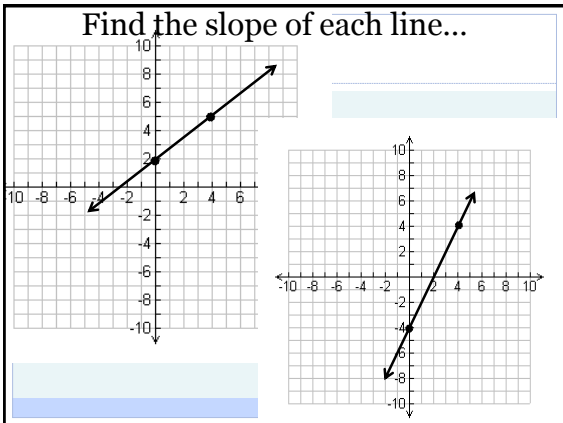
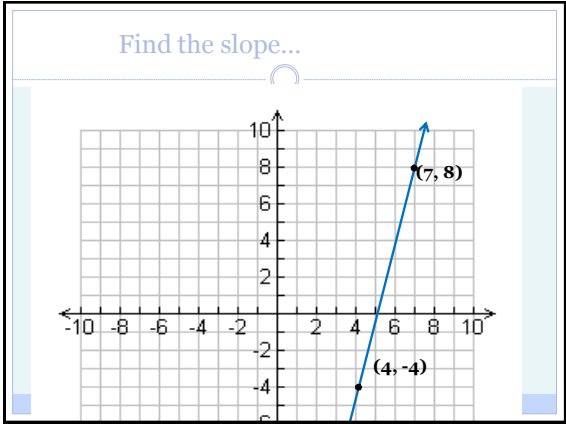


Find and interpret the slope.

**Estimated Maximum Heart Rate**



- A line has a constant rate of change!  
AKA
- A linear function has a constant slope!



### How do I get the slope?

- Between points (3, 2) and (5, 10)

### Finding slope for a linear function WITHOUT a graph

- You can get the change in y by subtracting the y-coordinates.
- You can get the change in x by subtracting the x-coordinates.

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

The 2's and 1's are not exponents. They are just LABELS.

$y_2 - y_1$  just means "the 2<sup>nd</sup> y minus the 1<sup>st</sup> y"

### Homework

- pg. 227 (13-16)