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Warmup $9/(\sqrt{5} \cdot \sqrt{5} \cdot \sqrt{5})$

NEED A WHITEBOARD, MARKER, ERASER INSIDE YOUR DESK

 This is Billy's height, recorded on his various birthdays. Is Billy growing at a constant rate? If so, what is the rate?

Years	Billy's height (inches)
4	32
7	41
9	47

2) One common mistake might be to divide 32 by 4 to get the rate at which Billy is growing. Explain what is wrong with this strategy.

- If you divide 141 by 11, you are saying 141 gallons drained out of the tank in 11 minutes.
- But 141 is not the amount that drained out, it is the amount that is left. We don't know how many drained out in those 11 minutes! It doesn't tell us the starting amount!
- You must go by the numbers you already have.

# of gallons in the tank	Minutes since the drain has been opened
-28 141	11
-26 ¹¹³	18
77	27
change in output change in input	$=\frac{-28}{7}=-4 \text{ gal/min}$
$\frac{-30}{7} = -$	-4 gal/min

4 gallons per minute. Were there 190 gallons at the start?

	# of gallons in the tank	Minutes since the drain has been opened
4901	141	11
1 Minute	113	18
145	77	27
140		
153	- something to do with y	Table C
165	147 -113 028	141 120 190 195 185
181	Tim was wrong	J. It would
1.59	nove had 185 go	1000 of the time!





Review Homework

Here is an x/y table. Is the rate of change constant? Show using the numbers in the table, then verify with the graph.





Review Homework

Do the points on the graph have a constant rate of change? If so, what is this rate? Make an x/2 table to help you with your calculations.



he table shows the number of bikes made by a company for certain years. Find the rate of change for ach time period. During which time period did the number of bikes increase at the fastest rate?



Review Homework

at tanker truck had access to a certain number of gallons of water at a recent fire. After several ad he did not record the initial amount of water as he was required, but he knew the truck used a recorded the following information:

# of hours at the scene	0	3	5	8	?
# of gallons remaining	?	336,000	240,000	96,000	0

• How many gallons per hour does the truck use?

48,000 gal hour

How much water did the truck have originally?

480,000 gallons

10 hours

How long will it take the truck to run out of water?

96,000 = 48,000	144,000	= 48,00
336,000		
480,000		
48,000)48	10	Rept 1

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Objectives:

-Be able to find the slope of a line on a graph! (Today)

10

-Be able to find the slope between two points without using a graph (Next Week)









How steep is this line?





Increases 2 numbers for every 1

Increases 1.5 numbers for every 1

Which line is steeper?









SLOPE

- SLOPE is <u>how steep a line is</u>.
- Specifically, it is how much the y-value increases for each x.
- **Bigger slope number = steeper line!**
- A straight line will NEVER CHANGE SLOPE!!!

How to find Slope from a Graph:

Pick two points, then find the:

change in y

change in x

• (Also known as $\frac{rise}{run}$)

