5.6 - Properties of Linear Relations

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Monday, November 27, 2017 6:53 PM

A linear relation means that a constant change in variable causes a constant change in the dependant varia

we can see this using:

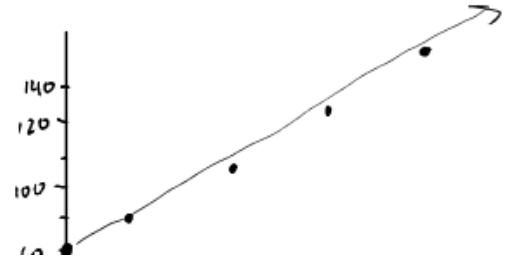
① A table of values ("T"-chart)

distance (km)	cost ($)
0	60
100	80
200	100
300	120
400	140

Same change each time ↳ constant

② Set of ordered pairs: {(0, 60), (100, 80), (200, 100), (300, 12

③ A graph:



A Gra relatio line.

February 5, 2020 10:50 AM

rate of change = $\frac{\text{change in dependant variable}}{\text{change in independant variable}}$

rate of change ("slope") $= \frac{\text{change in dependant variable}}{\text{change in independant variable}}$.

The function of the above graph can be given by:

$$C = 0.2d + 60$$

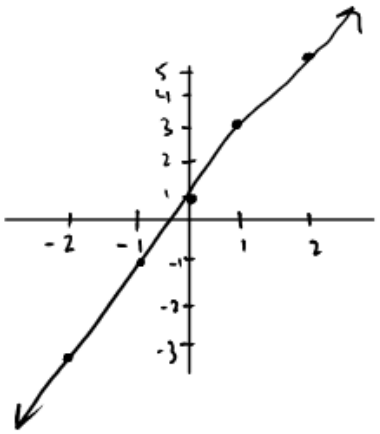
- C: cost, dependant variable
- 0.2: rate of change
- d: distance, independent
- 60: initial amount.

How to graph an equation: (Ex: $y = 2x + 1$)

① Table of values.

x	$y = 2x+1$
-2	$2(-2)+1 = -3$
-1	$2(-1)+1 = -1$
0	1
1	3
2	5

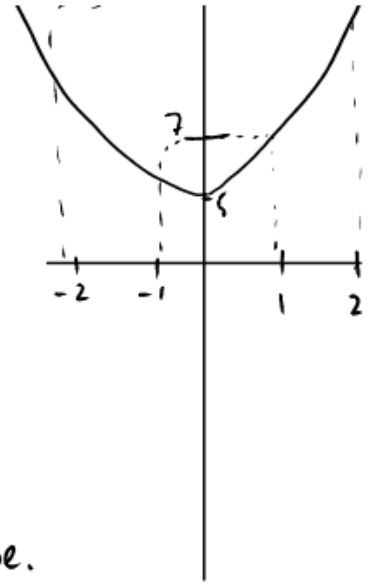
$\Rightarrow$



Is th
a fu

What's the rate of change? Pick 2 points. How much does dependant variable change? $\Rightarrow 2$ / independant variable change? $\Rightarrow 1$ } $2/1 = 2$.

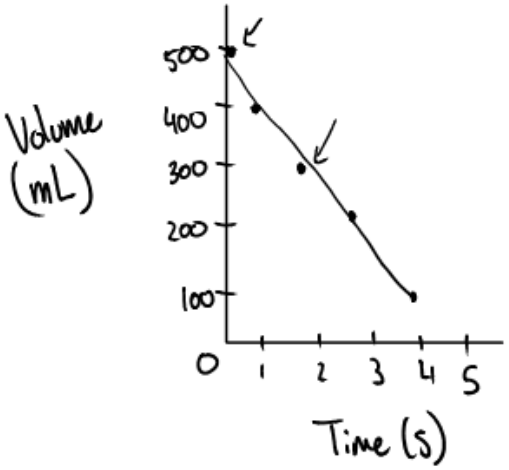
x	f(x)
-2	13
-1	7
0	5
1	7
2	13



linear?
functio

Slope? Not linear. No slope.

x: The following graph shows water being poured out of a bucket



linear?
↳ Yes. Straight line.

rate of change?

(going down

$$\frac{\text{dependant change}}{\text{independant change}} = \frac{-200}{2} =$$

HW: Pg. 308 #[3-5 a,c only], 6, 9, 11, 16