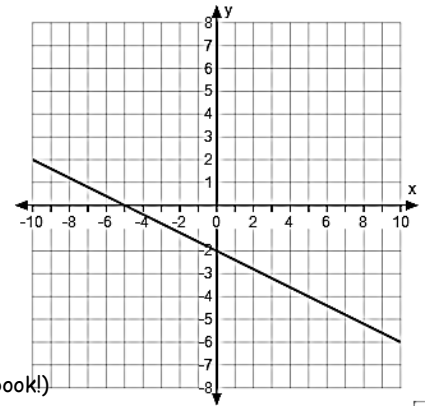


Determine the slope of the line to the right using TWO different methods.



Unit 5: Linear Relations I (Chapter 5 in textbook!)

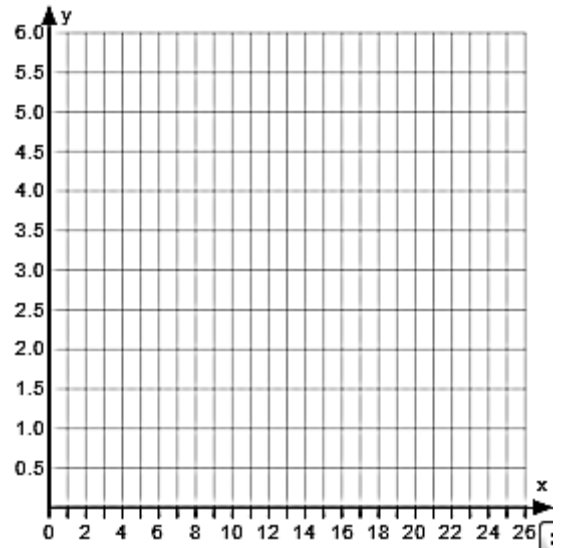
Day 4 - Direct Variation

Ex. 1 The following table shows the relation between the distance and the time on a bike ride.

Time (min)	Distance (km)
1	0.2
5	1
10	2
15	3
20	4

Graphing Hint:

Since the DISTANCE depends on the TIME, Distance is the dependent variable.



- Draw the graph
- Is the bike going at a constant speed?
- What speed is the bike going?
- What equation models this bike ride?
- How long will it take to ride 5 km?

Definition of DIRECT VARIATION:

A relationship between two variables in which

The equation is in the form of _____
 where _____ is the constant multiple (or constant of variation).

The line goes through _____.

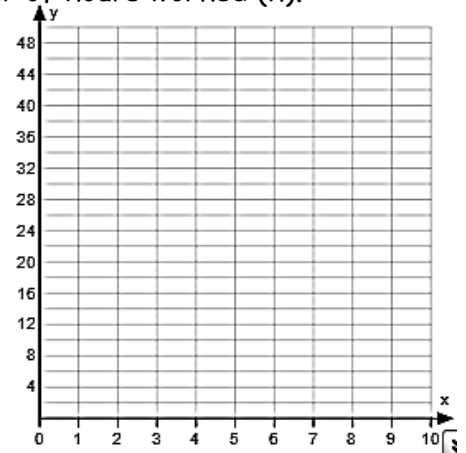
Ex. 2: Paula works as a lifeguard. Her total earnings vary directly with the number of hours she works. She earned \$120 for 15 hours of work last week.

a) Find the equation that relates her wages (w) with the number of hours worked (h).

b) How much does Paula earn for 22 h of work?

c) How many hours does Paula need to work to earn \$76?

d) Graph the relation.

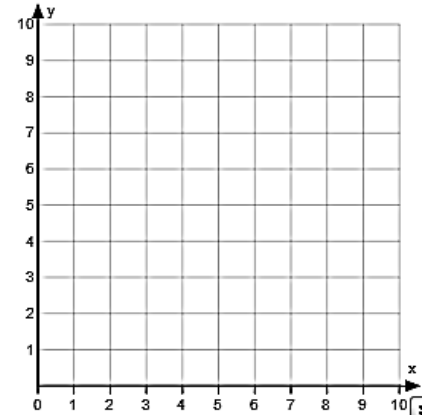


Ex. 3 The cost of bananas varies directly with the mass in kg. If bananas cost \$1.25/kg,

a) Make a table of values.

Mass (kg)	Cost (\$)

b) Graph the Relation



c) Write an equation in the form of $y = mx$

d) Use the graph to estimate how many kgs of bananas could be bought for \$5.75.

e) Use the equation to calculate how many kgs of bananas could be bought for \$5.75.

Summarizing Direct Variation:

	Looks Like...	Example
Equation	$y = mx$ where m is the <u>constant</u> multiple (m is a number)	$C = 3.20g$ $D = 80t$
Graph	- a line that goes through the origin 