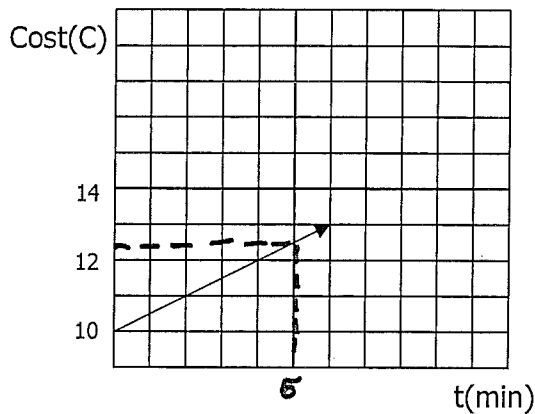
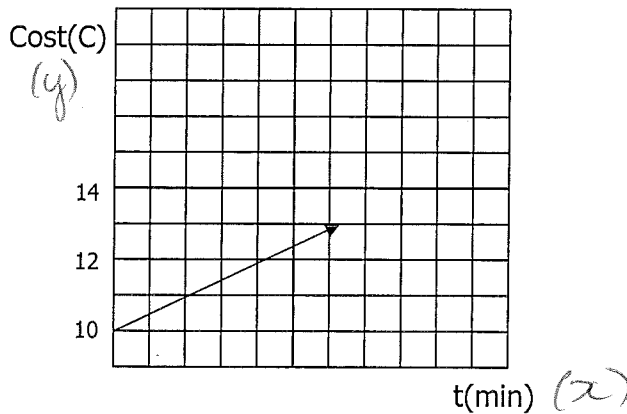


- We already know that a RELATION can be shown as a) set of symbols
b) Table of values and c) equation
- We can use them to determine the STARTING POINT and RATE OF CHANGE
- In section 5.2 we found that a relation can be shown as a graph
A LINEAR RELATION has a STRAIGHT LINE as a graph

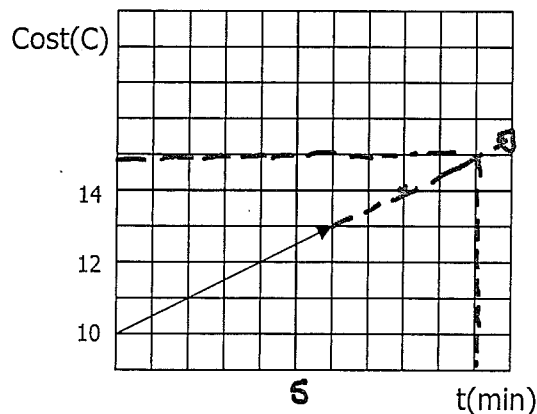
~~\$5~~ **\$10**

EXAMPLE: Shane's cell plan has a ~~\$5~~ activation fee and a \$0.50/minute charge



Interpolate:
Estimate values between data points

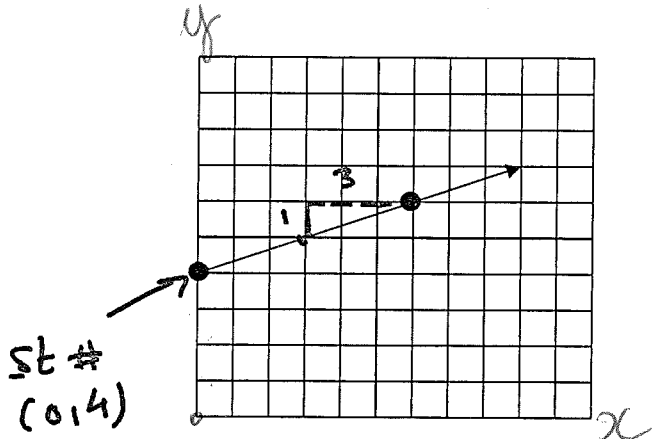
Find the total cost for 5 min. of calling \approx \$12.50



Extrapolate:
Estimate values beyond the data points

How many minutes of calling results in a cost of \$15
 \approx 10 min

- Using a graph to find the a) Starting Point and b) Rate of Change



Starting Point

Point that is on the vertical axis

4 (where $x=0$)

Rate of Change

Connect two points with:
a horizontal and
a vertical line

Rate of Change is $\frac{\text{vertical change}}{\text{horizontal change}}$

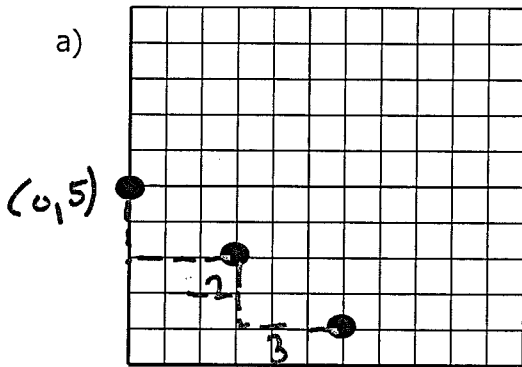
$$r/c = \frac{1}{3}$$

- The equation for the above relation is:

$$y = 4 + \frac{1}{3}x \text{ or } y = \frac{1}{3}x + 4$$

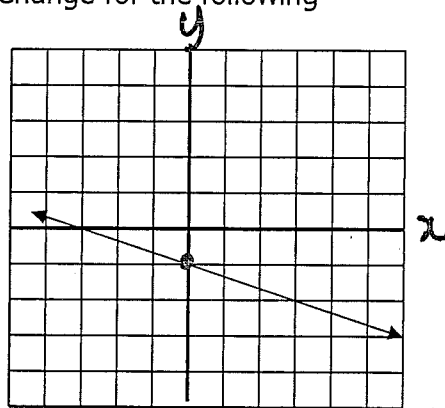
- Find the Starting Point and Rate of Change for the following

a)



$$\text{st \#} = 5 ; r/c = -\frac{2}{3}$$

b)

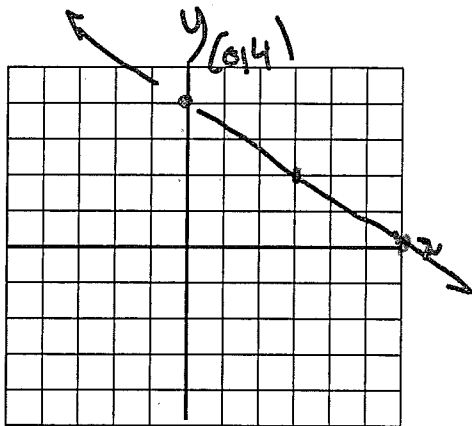


$$\text{st \#} = -1 ; r/c = -\frac{1}{3}$$

- What is the rate of change of a line joining (1, 3) and (6, 4)?

$$r/c = \frac{4-3}{6-1} = \frac{1}{5}$$

- Draw a line with a starting point of 4 and a rate of change of $\frac{-2}{3}$.



Homework Questions:

pg 214 1, 2, 3, 4, 5, 9, 10, 11, 15, 18