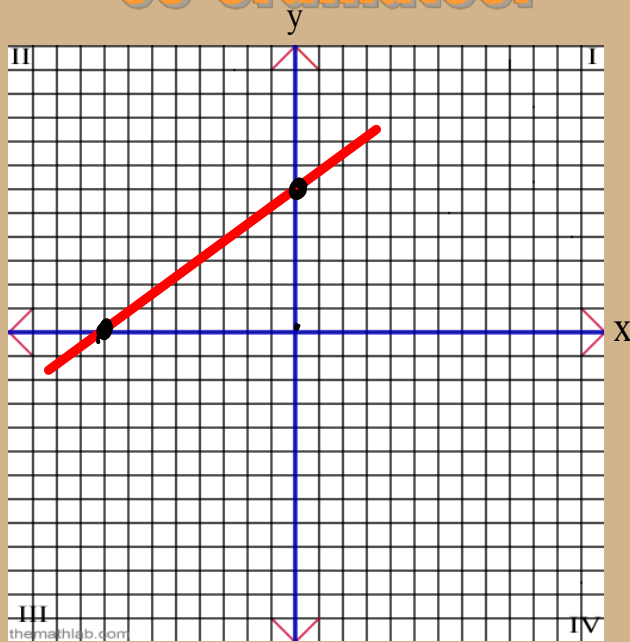


2 How do you write the co-ordinates?



x-intercept = -8

(-8, 0)

Y = 0 for the x-intercept.

y-intercept = 6

(0, 6)

X = 0 for the y-intercept.

$$y = mx + b$$

#

m = Rate of Change (Slope) $\frac{\text{rise}}{\text{run}}$

b = [redacted] (vertical intercept or y-int.)

Find the Slope and Y-intercept

1) $y = 5x + 10$
 Slope $\rightarrow 5$ or $\frac{5}{1}$
 yint $\rightarrow 10$



2) $P = -2t - 3$

Roc $\rightarrow -2$
 yint $\rightarrow -3$

3) $R = \frac{-5g + 7}{2}$

Roc $\rightarrow -\frac{5}{2}$
 yint $\rightarrow 7$

4) $y = 8 + \frac{1}{2}x$

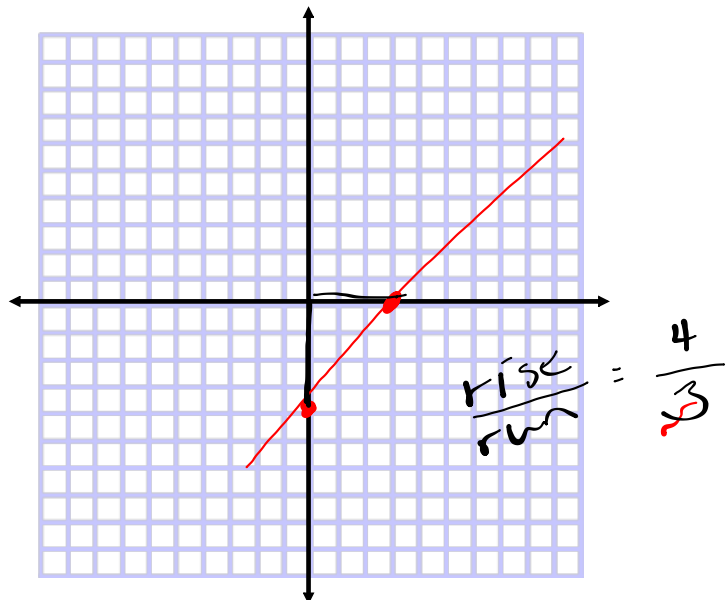
Roc $\rightarrow \frac{1}{2}$
 yint $\rightarrow 8$

Graph the following:

y intercept = -4

x Intercept = 3

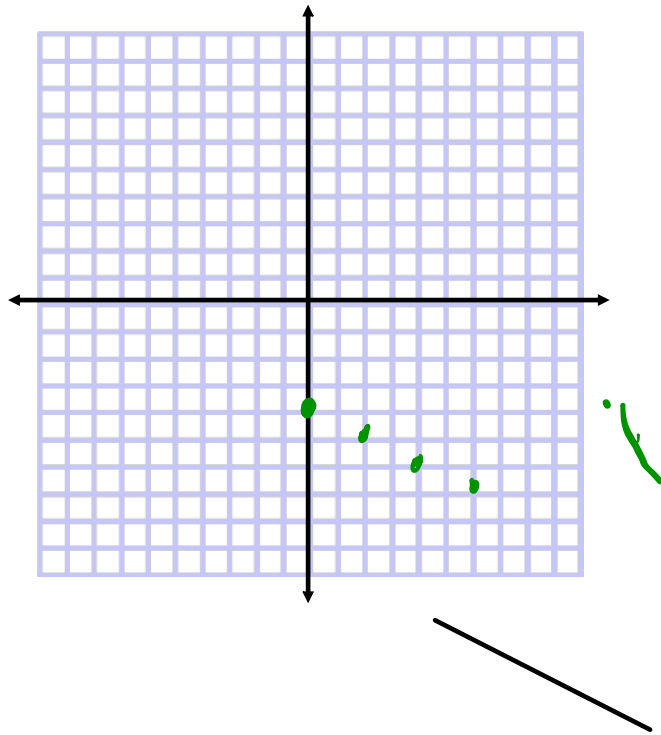
rate of Change = ?



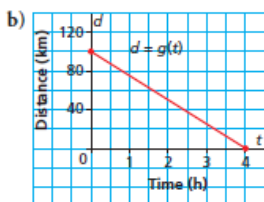
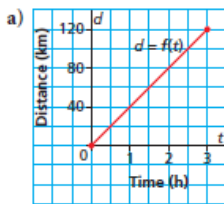
Graph the following:

y intercept = -4

Slope = -1/2



4. Each graph below shows distance, d kilometres, as a function of time, t hours. For each graph:
- Determine the vertical and horizontal intercepts. Write the coordinates of the points where the graph intersects the axes.
 - Determine the rate of change.
 - Determine the domain and range.



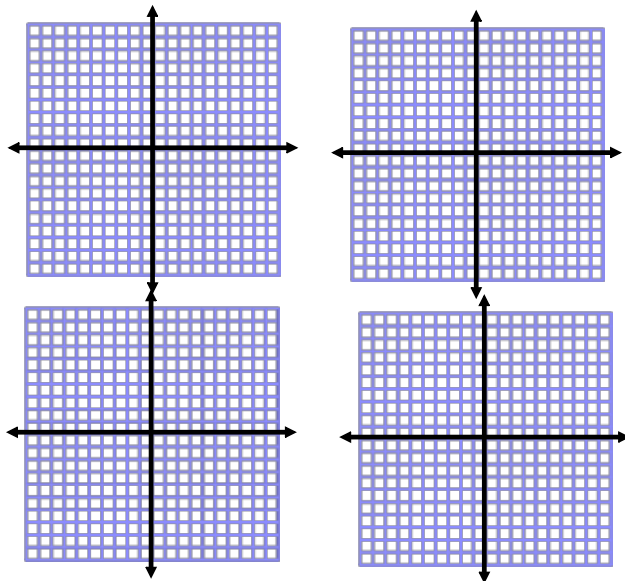
6. Sketch a graph of each linear function.

a) $f(x) = 4x + 3$

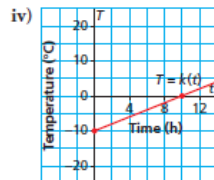
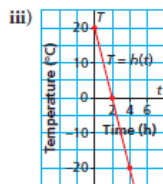
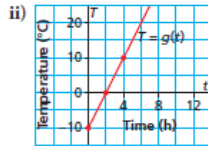
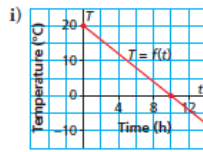
b) $g(x) = -3x + 5$

c) $h(x) = 9x - 2$

d) $k(x) = -5x - 2$



8. The graphs below show the temperature, T degrees Celsius, as a function of time, t hours, at different locations.
- Which graph has a rate of change of $5^\circ\text{C}/\text{h}$ and a vertical intercept of -10°C ?
 - Which graph has a rate of change of $-10^\circ\text{C}/\text{h}$ and a vertical intercept of 20°C ?



19. Here are two equations that can be used to model the value, V dollars, of a \$24 000 truck as it depreciates over n years:
 $V = 24\,000 - 2000n$ and $V = 24\,000(0.2^n)$
- Which equation represents a linear relation? Justify your answer.
 - For the linear relation, state the rate of change. What does it represent?