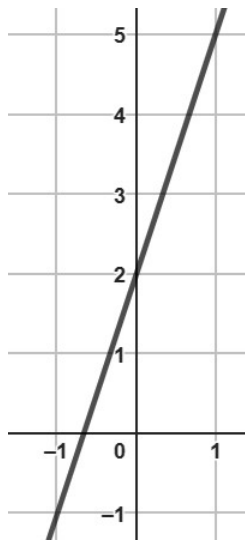


(25) Straight Line Graphs in the form $y = mx + c$

WORKING AT D/E

(1) Find the gradient of the line passing through the points $(-1,8)$ and $(4,10)$ giving your answer as a simplified fraction.

(2) (a) Write down the equation of the line shown in the form $y = mx + c$



(b) Draw the line with equation $y = 3 - x$

(3) What is the gradient of the line with equation $6x + 4y = 3$?

WORKING AT B/C

(1) A line passing through the points $(-6, p)$ and $(2, -4)$ has gradient $-\frac{9}{8}$.

(a) Find the value of p

(b) Find where the line crosses the coordinate axes.

(2) A line with gradient $\frac{3}{5}$ passes through the point $(8,2)$.

(a) Find the equation of the line in the form $ax + by = c$

(b) The line passes through the point $(0, q)$. Show that q is a rational fraction.

(3) The line with equation $ax + 10y - 2 = 0$ has a gradient of $\frac{4}{7}$. Find the value of a .

WORKING AT A*/A

(1) The line $ax + by - 40 = 0$ where a and b are integers in their simplest form. Given that passes through the coordinate axes at $(10,0)$ and $(0,20)$, find the values of a and b .

(2) The line with equation $ax + by + c = 0$, passes through the positive x axis. Given that a is negative and b and c are positive:

Write an inequality in x in terms of a and c

(3) L_1 has equation $ax + by + c = 0$ and L_2 has equation $y = px + q$. Given that the lines do not intersect, and they are NOT the same straight line, show that $a + bp = 0$