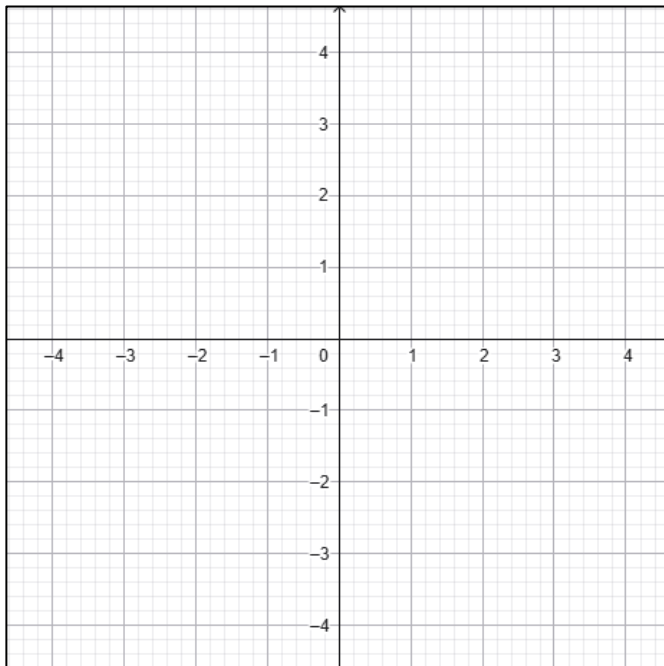


Student name

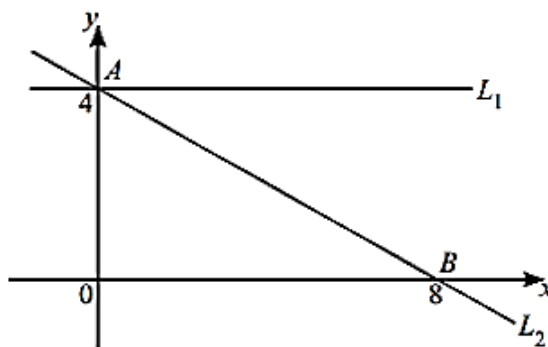
1



On the grid draw the lines:

- a) $y = -x$
- b) $2x + 2y + \frac{1}{2} = 0$
- c) $\frac{2}{3}x + 2 = 0$
- d) $\frac{2}{5}y - \frac{7}{5} = 0$

2



NOT TO
SCALE

A is the point $(0, 4)$ and B is the point $(8, 0)$.
The line L_1 is parallel to the x -axis.
The line L_2 passes through A and B .

- (a) Write down the equation of L_1 .
- (b) Find the equation of L_2 .
Give your answer in the form $y = mx + c$.
- (c) C is the point $(2, 3)$.
The line L_3 passes through C and is perpendicular to L_2 .
 - (i) Show that the equation of L_3 is $y = 2x - 1$.
 - (ii) L_3 crosses the x -axis at D .

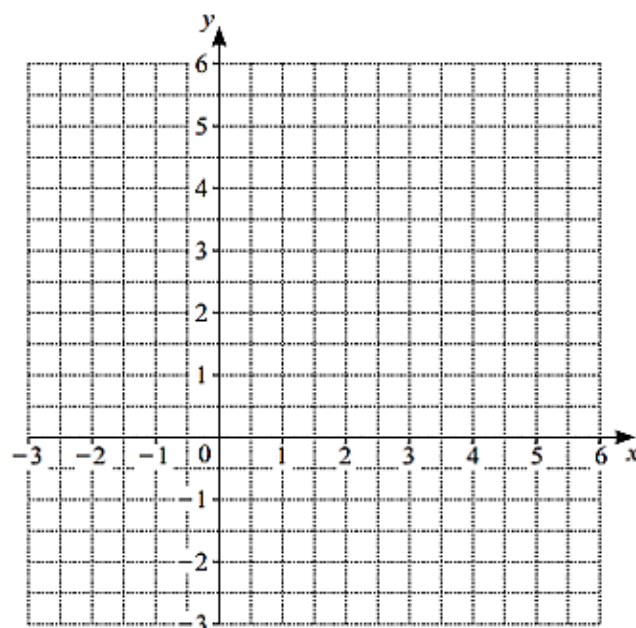
Find the length of CD .

- 3 C is the point $(5, -1)$ and D is the point $(13, 15)$.

- (a) Find the midpoint of CD .
- (b) Find the gradient of CD .
- (c) Find the equation of the perpendicular bisector of CD .
Give your answer in the form $y = mx + c$.

- 4 (a) In the square $ABCD$, A has coordinates $(-2, 1)$ and B has coordinates $(1, 5)$.
 C has coordinates (a, b) , where a and b are both positive integers.

Find the coordinates of C and the coordinates of D .
You may use the grid to help you.



- (b) P has coordinates $(-1, 3)$ and Q has coordinates $(6, 4)$.
 - (i) Find the coordinates of the midpoint of PQ .
 - (ii) Find the length PQ .
 - (iii) Find the gradient of PQ .
 - (iv) Find the equation of the line parallel to PQ that crosses the x -axis at $x = 2$.

- 5 The equation of line L is $y = 5x - 3$.

- (a) Write down the gradient of line L .
- (b) Write down the equation of a line parallel to line L .