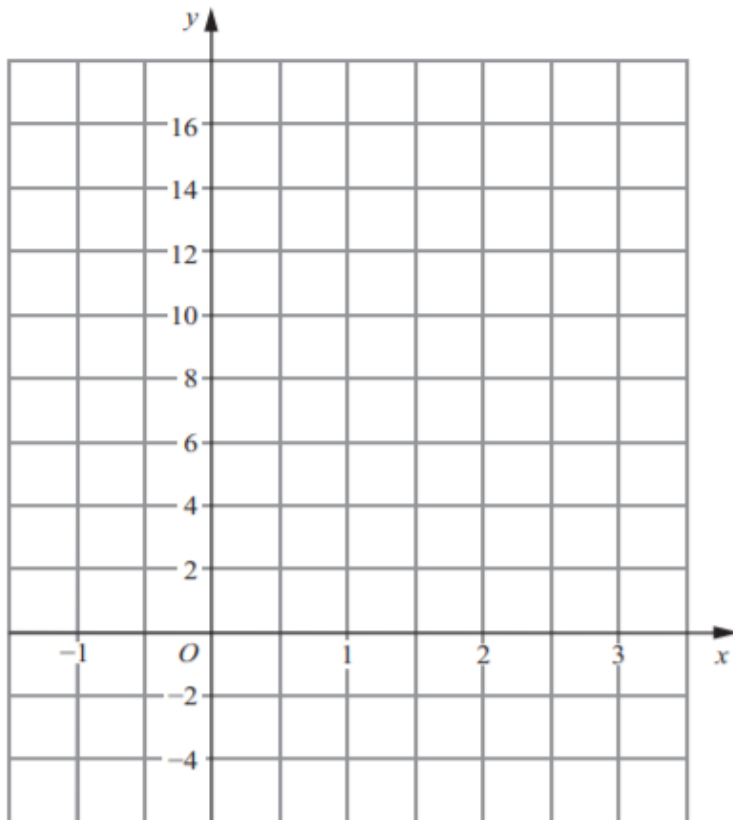


Straight Line Graph GCSE Maths EDEXCEL Higher Tier Past Papers
Questions None Calculator

1.

(a) On the grid, draw the graph of $y = 4x + 2$ from $x = -1$ to $x = 3$



(3)

(b) (i) Write down the equation of a straight line that is parallel to $y = 4x + 2$

.....

(ii) Write down the gradient of a straight line that is perpendicular to $y = 4x + 2$

.....

(2)

(Total for Question 5 is 5 marks)

2.

The point A has coordinates $(3, 8)$.

The point B has coordinates $(7, 5)$.

M is the midpoint of the line segment AB .

Find the coordinates of M .

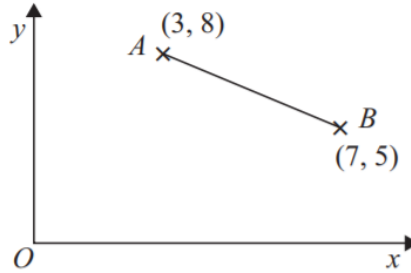


Diagram **NOT**
accurately drawn

.....
(Total for Question 7 is 2 marks)

3.

The diagram shows a cuboid drawn on a 3-D coordinate grid.

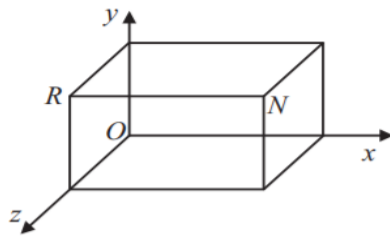


Diagram **NOT**
accurately drawn

The vertex N of the cuboid has coordinates $(6, 2, 4)$.

(a) What are the coordinates of the vertex R ?

(..... , ,)
(1)

(b) What are the coordinates of the midpoint of the line segment RN ?

(..... , ,)
(2)

(Total for Question 13 is 3 marks)

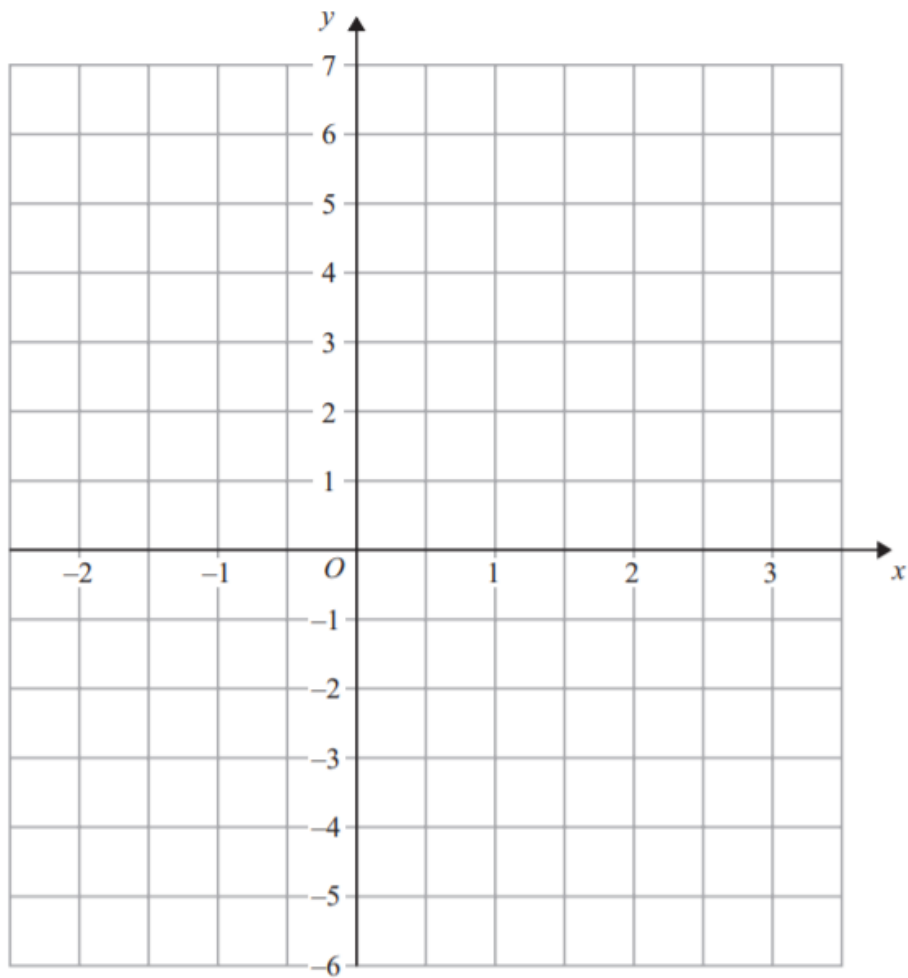
4.

Find an equation of the straight line that is perpendicular to the straight line $x + 2y = 5$ and that passes through the point $(3, 7)$.

.....
(Total for Question 17 is 4 marks)

5.

On the grid, draw the graph of $y = 2x - 1$ for values of x from -2 to 3



(Total for Question 6 is 3 marks)

6.

Find the coordinates of the midpoint of the line joining the points (1, 2) and (4, 0).

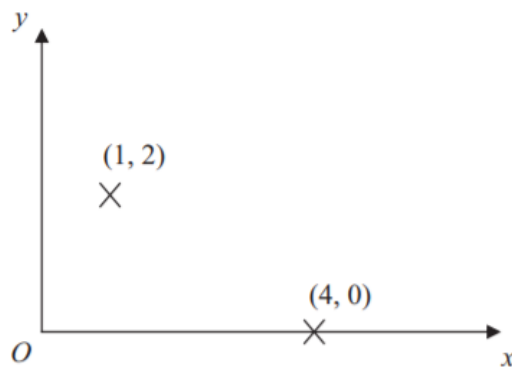


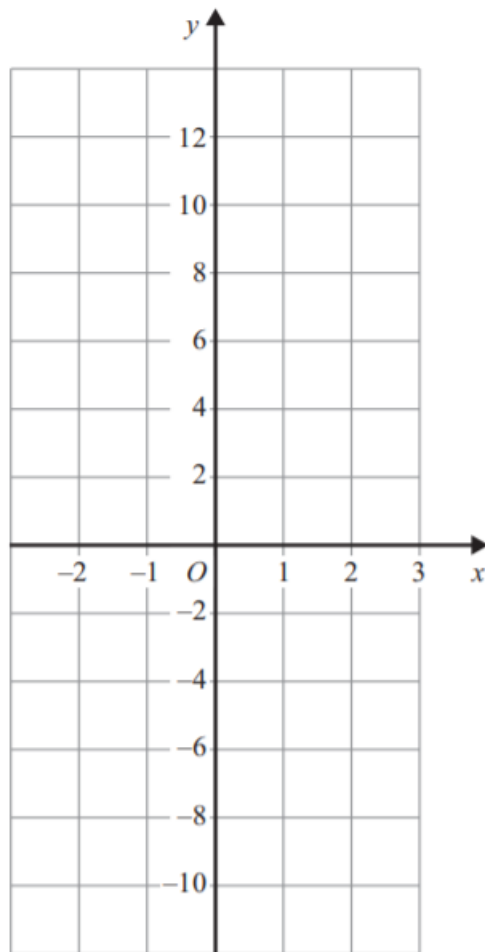
Diagram **NOT**
accurately drawn

(..... ,)

(Total for Question 3 is 2 marks)

7.

On the grid, draw the graph of $y = 4x - 2$ for values of x from $x = -2$ to $x = 3$



(Total for Question 8 is 3 marks)

8.

L is a straight line.

The gradient of L is 4

L passes through the point $(0, 2)$.

(a) Write down an equation of the straight line L .

.....
(2)

L_1 is a straight line parallel to L .

L_1 passes through the point with coordinates $(2, -6)$

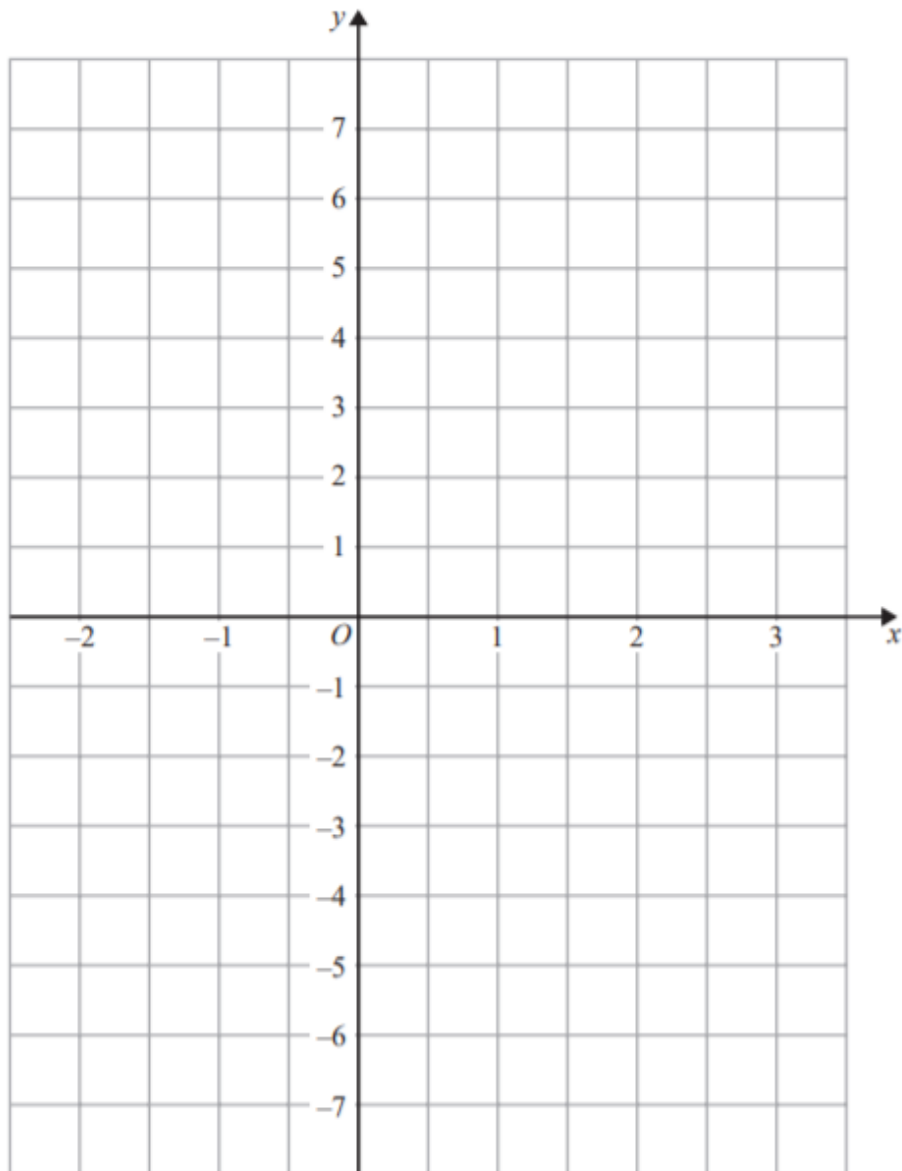
(b) Find an equation of L_1 .

.....
(3)

.....
(Total for Question 15 is 5 marks)
.....

9.

On the grid, draw the graph of $y = 2x - 3$ for values of x from -2 to 3



(Total for Question 4 is 3 marks)

11.

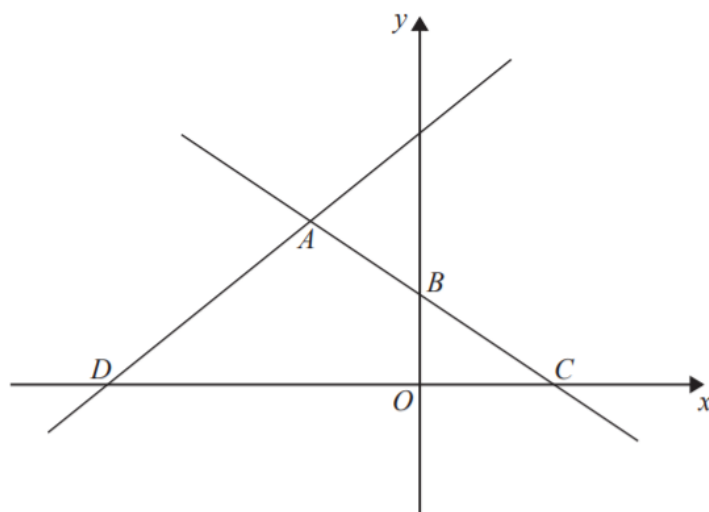


Diagram **NOT**
accurately drawn

In the diagram, ABC is the line with equation $y = -\frac{1}{2}x + 5$

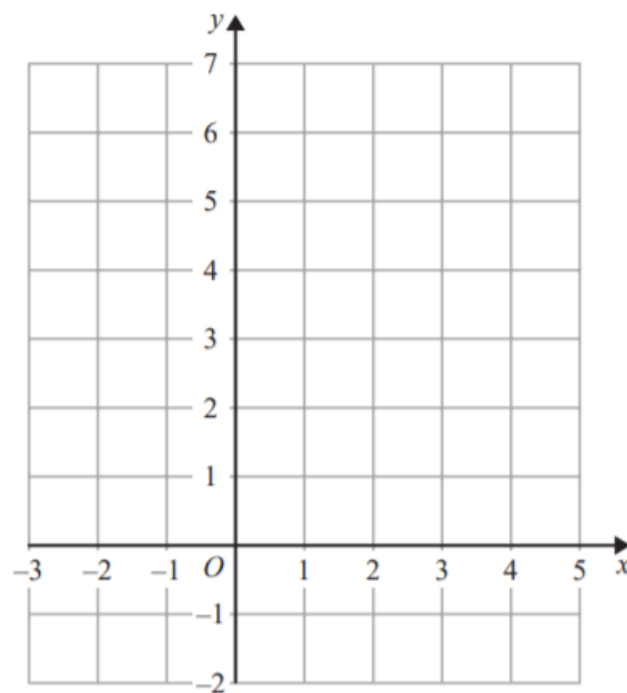
$AB = BC$

D is the point with coordinates $(-13, 0)$

Find an equation of the line through A and D .

12.

On the grid, draw the graph of $y = \frac{1}{2}x + 3$ for values of x from -2 to 4



(Total for Question 4 is 3 marks)

13.

The diagram shows a cube drawn on a 3-D grid.

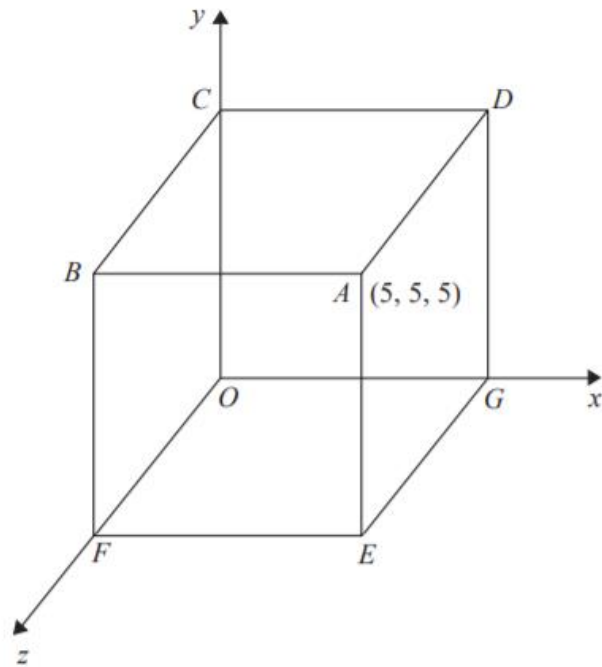


Diagram **NOT** accurately drawn

The coordinates of vertex A are $(5, 5, 5)$.

(a) Write down the coordinates of vertex B .

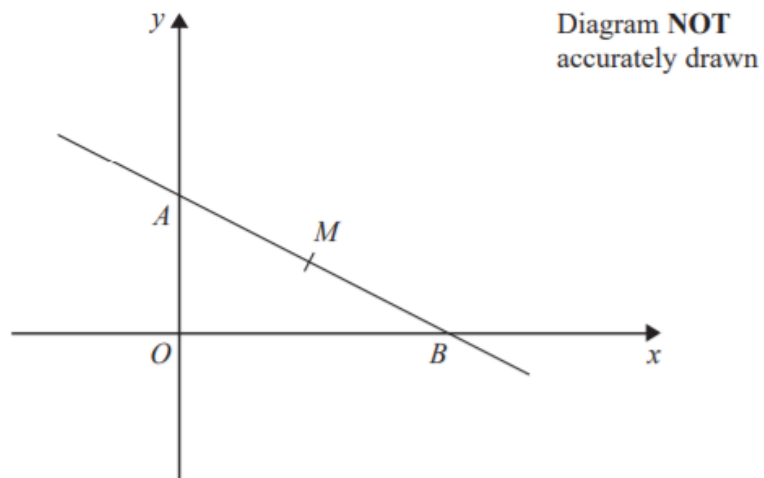
(..... , ,)
(1)

(b) Work out the coordinates of the midpoint of AC .

(..... , ,)
(1)

(Total for Question 12 is 2 marks)

14.



In the diagram A is the point $(0, 4)$
 B is the point $(6, 0)$

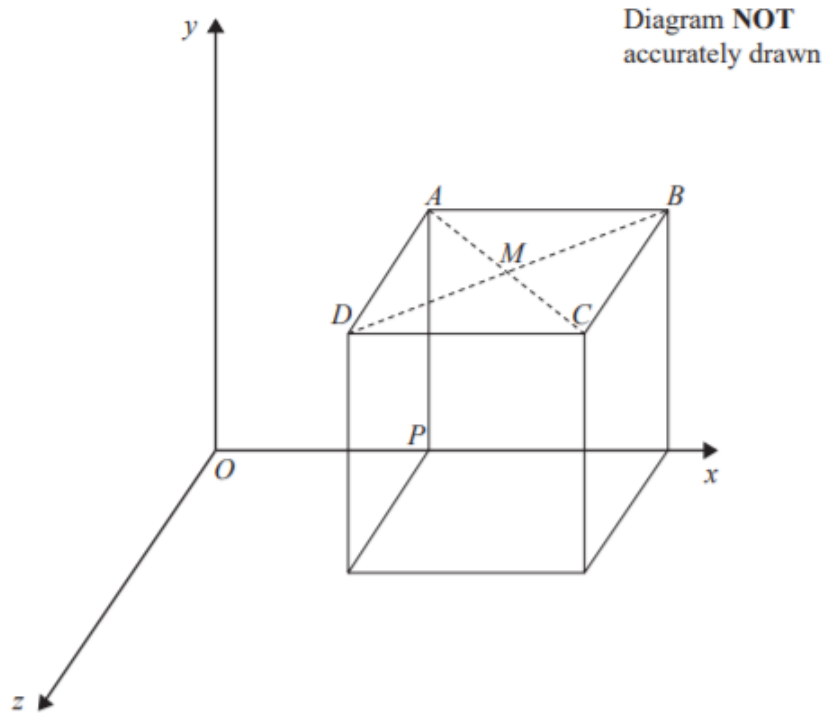
M is the midpoint of AB .

Find an equation of the line that passes through M and is perpendicular to AB .

(Total for Question 15 is 4 marks)

15.

The diagram shows a cube on a 3-D grid.



The coordinates of vertex P are $(3, 0, 0)$.

The coordinates of vertex B are $(5, 2, 0)$.

Another vertex of the cube has coordinates $(3, 0, 2)$.

(a) Write down the coordinates of vertex C .

(.....,,)
(1)

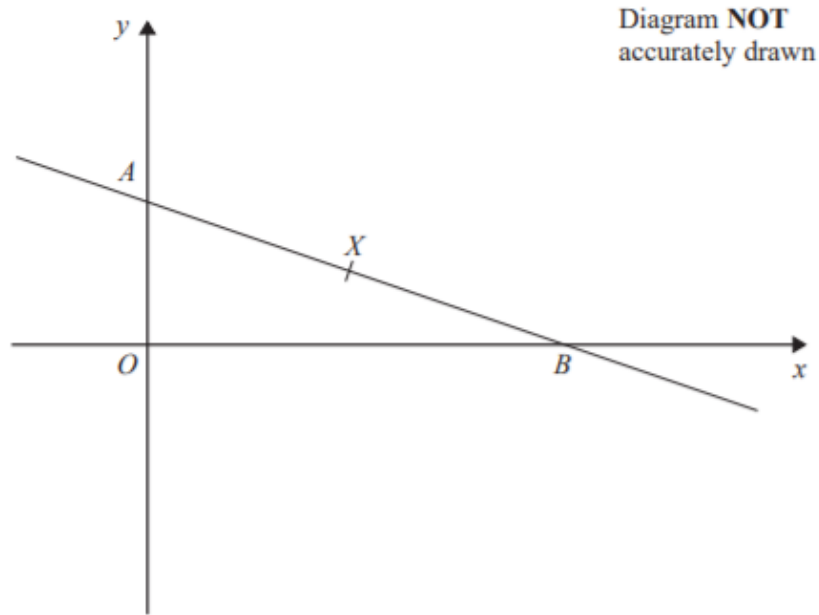
M is the point where the diagonals of the top face of the cube intersect.

(b) Work out the coordinates of M .

(.....,,)
(2)

(Total for Question 13 is 3 marks)

16.



In the diagram A is the point $(0, 2)$
 B is the point $(6, 0)$
 X is the point $(3, 1)$

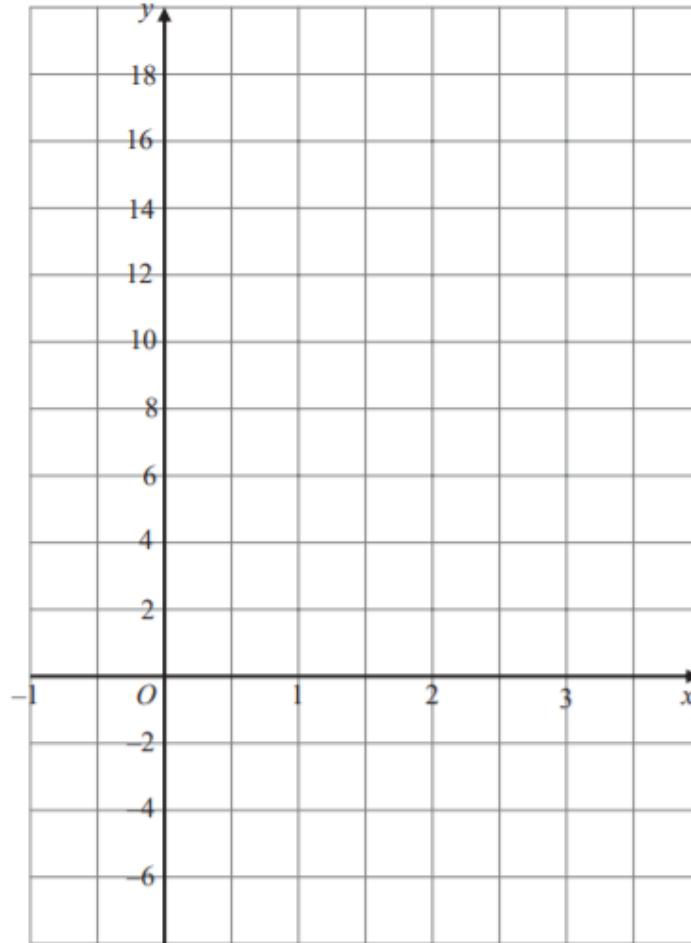
Find an equation of the line through X that is perpendicular to AB .

(Total for Question 17 is 4 marks)

17.

(a) On the grid, draw the graph of $y = 5x + 1$ from $x = -1$ to $x = 3$

(3)



(b) Which of the following is the equation of a line parallel to $y = 5x + 1$?

(1)

- A** $y = x + 1$
 B $5y = x + 1$
 C $y + 5x = 3$
 D $y - 5x + 1 = 0$
 E $y = -\frac{x}{5} + 1$

(c) Find the equation of line which is perpendicular to $y = 5x + 1$ and passes through the point $(0, 0)$.

(2)

(Total for Question 7 = 6 marks)