



# EXAM PAPERS PRACTICE

GCSE OCR Math J560

Equations of a line /  
 $y = mx + c$

Question Paper

*"We will help you to  
achieve A Star "*

### Question 1

The equation of the line  $L_1$  is  $y = 3x - 2$

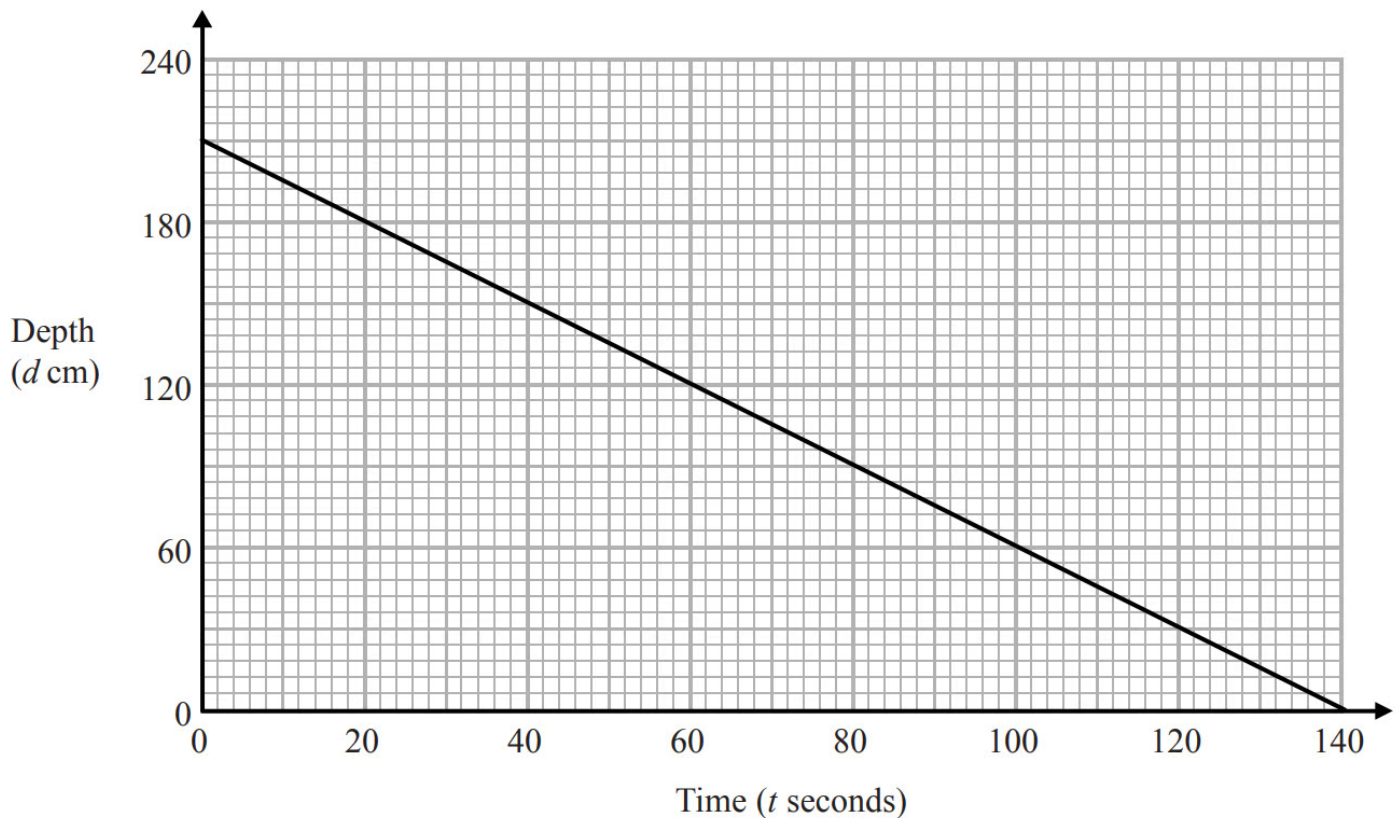
The equation of the line  $L_2$  is  $3y - 9x + 5 = 0$

Show that these two lines are parallel.

[2 marks]

### Question 2

The graph shows the depth,  $d$  cm, of water in a tank after  $t$  seconds.



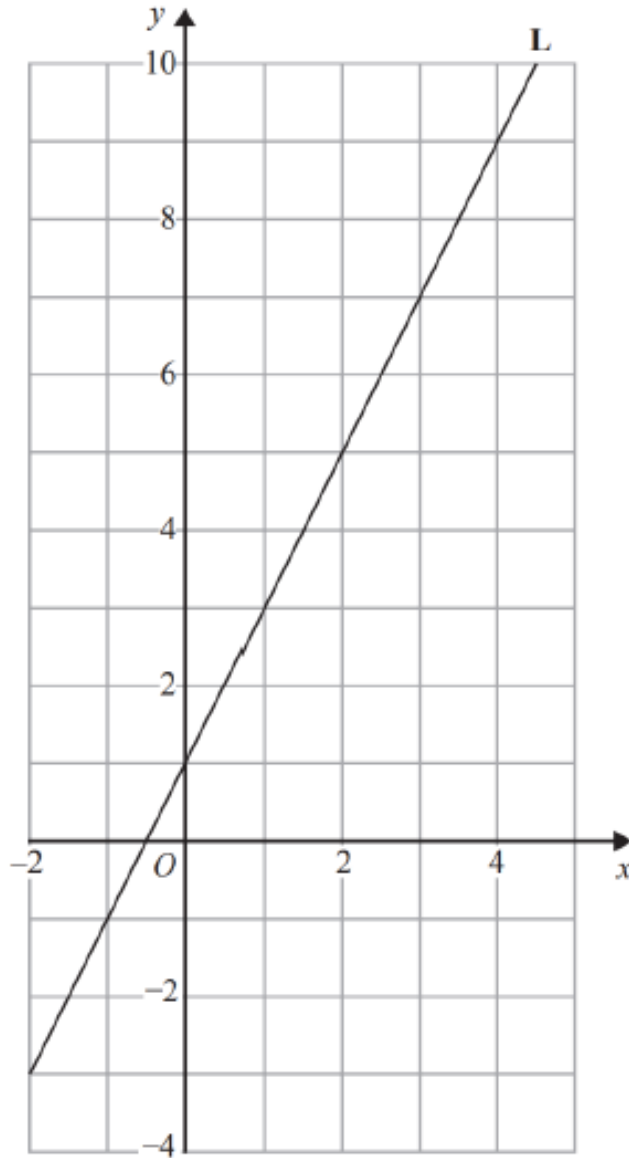
(a) Find the gradient of this graph.

[2 marks]



**Question 3**

Line **L** is drawn on the grid below.



Find the equation for the straight line **L**.  
Give your answer in the form  $y = mx + c$

[3 marks]

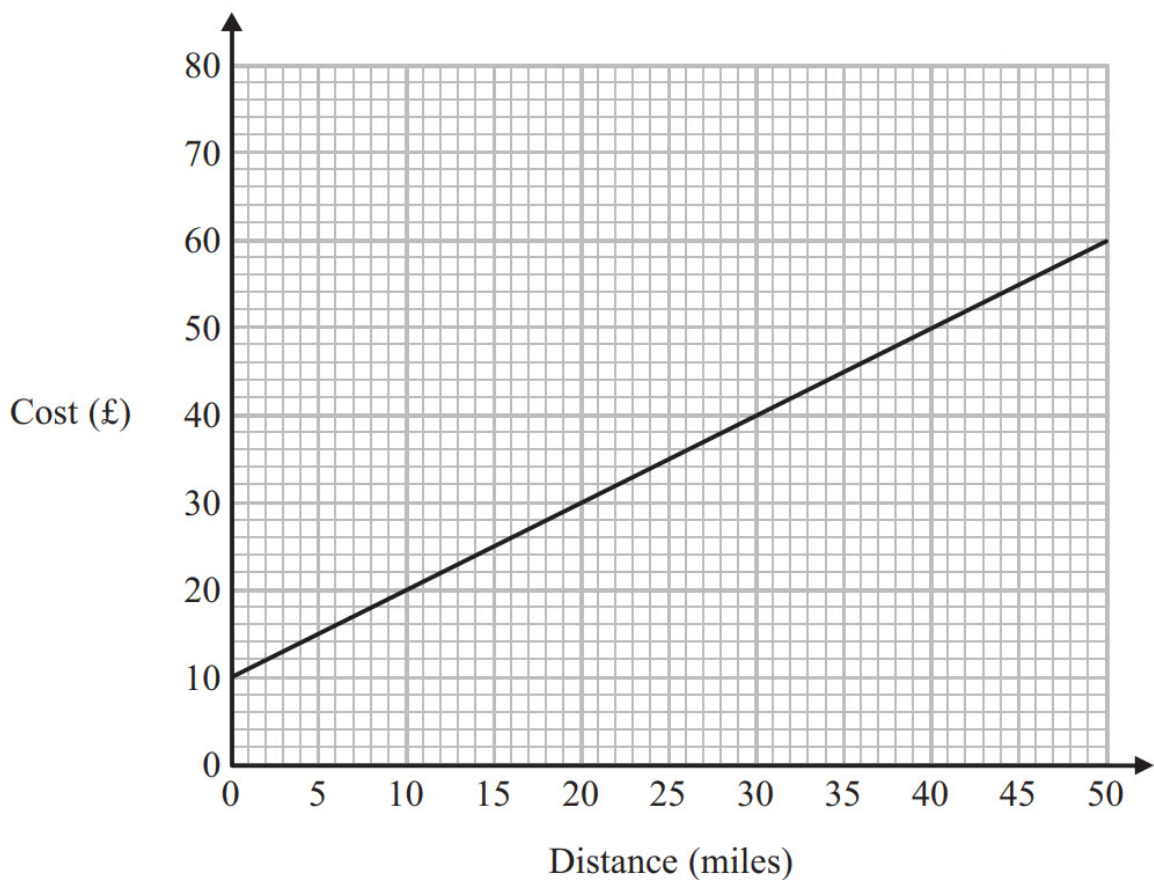


**Question 4**

Bill uses his van to deliver parcels.

For each parcel Bill delivers there is a fixed charge plus £1.00 for each mile.

You can use the graph to find the total cost of having a parcel delivered by Bill.



(a) How much is the fixed charge?

[1 mark]



**Question 5**

(a) Complete the table of values for  $y = 2x + 5$

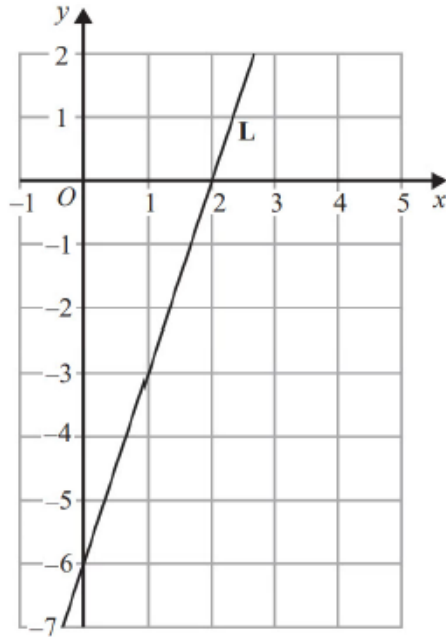
$x$	-2	-1	0	1	2
$y$	1		5		

[2 marks]



**Question 6**

The line **L** is shown on the grid.



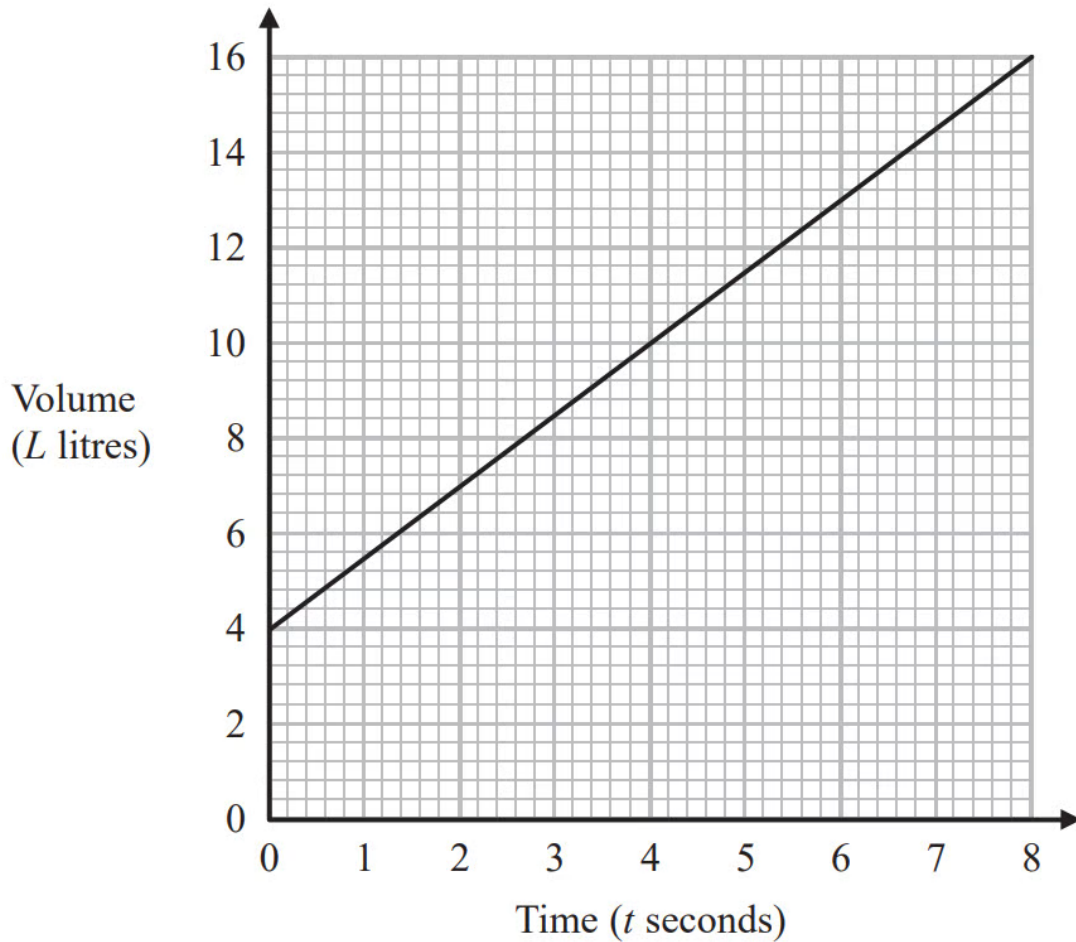
Find an equation for **L**.

**[3 marks]**



**Question 7**

The graph shows the volume of liquid ( $L$  litres) in a container at time  $t$  seconds.



(a) Find the gradient of the graph.

[2 marks]



**Question 8**

Here are the equations of four straight lines.

Line A  $y = 2x + 4$

Line B  $2y = x + 4$

Line C  $2x + 2y = 4$

Line D  $2x - y = 4$

Two of these lines are parallel.

Write down the two parallel lines?

[1 mark]





**Question 9**

**A** and **B** are straight lines.

Line **A** has equation  $2y = 3x + 8$

Line **B** goes through the points  $(-1, 2)$  and  $(2, 8)$

Do lines **A** and **B** intersect?

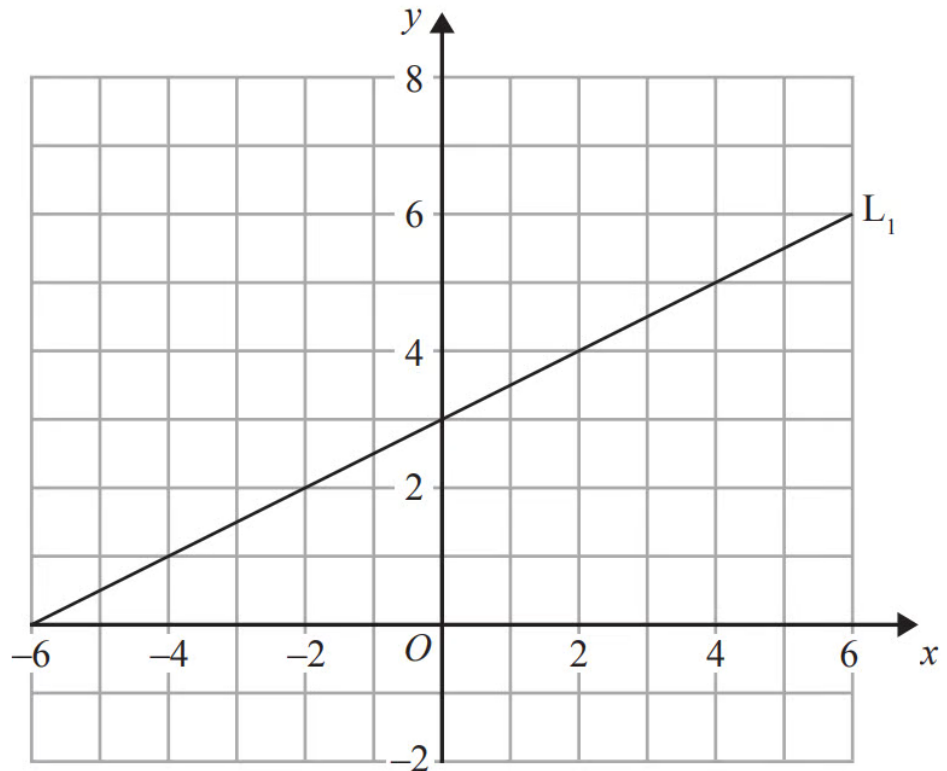
You must show all your working.

[3 marks]



**Question 10**

The diagram shows a straight line,  $L_1$ , drawn on a grid.



A straight line,  $L_2$ , is parallel to the straight line  $L_1$  and passes through the point  $(0, -5)$ .

Find an equation of the straight line  $L_2$ .

**[3 marks]**



**Question 11**

$L_1$  and  $L_2$  are parallel lines.

The equation of  $L_1$  is  $y = 3x + 2$

$L_2$  passes through the point  $(3, 4)$ .

Find an equation for  $L_2$ .

**[3 marks]**



**Question 12**

$AB$  is a line segment.

The midpoint of the line segment  $AB$  has coordinates  $(3, 5)$

Point  $A$  has coordinates  $(9, 2)$

(a) Work out the coordinates of point  $B$ .

**[2 marks]**



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**Question 13**

(b) Work out an equation of the straight line that passes through (9, 2) and (3, 5)

**[3 marks]**



**Question 14**

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



[4 marks]