Straight Line Graphs and $y = mx + c$

1. A straight line has equation $4y - 5x = 2$
Work out the gradient of this line.

.....

(Total 2 marks)

2. A straight line has equation $y = 5 - 3x$

(a) Write down the gradient of the line.

……..

(1)

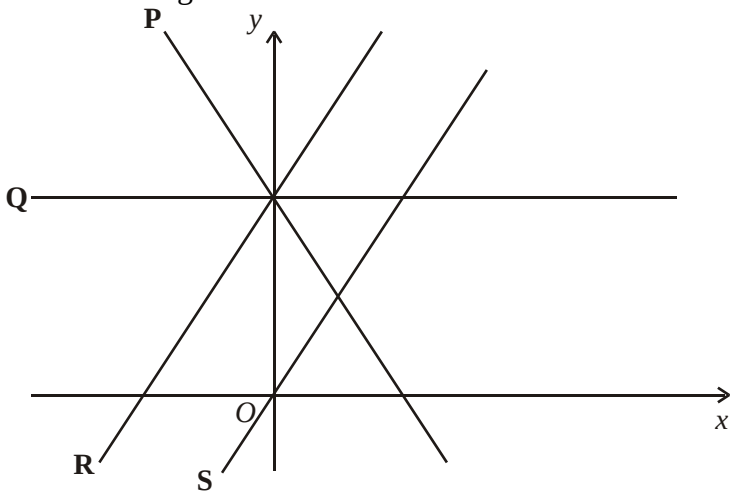
(b) Write down the coordinates of the point where the line crosses the y axis.

(…… , ……)

(1)

(Total 2 marks)

3. The diagram shows 4 straight lines, labelled **P**, **Q**, **R** and **S.**
The equations of the straight lines are



A: $y = 2x$
B: $y = 3 - 2x$
C: $y = 2x + 3$
D: $y = 3$

Match each straight line, **P**, **Q**, **R** and **S** to its equation.
Complete the table.

Equation	**A**	**B**	**C**	**D**
Straight line				

(Total 2 marks)

4. A straight line passes through the points (0, 5) and (3, 17).
Find the equation of the straight line.

.....

(Total 3 marks)

5. A straight line, **L**, passes through the point with coordinates (4, 7) and is parallel to the line with equation $y = 2x + 3$.
Find an equation of the straight line **L**.

……

(Total 3 marks)

6.

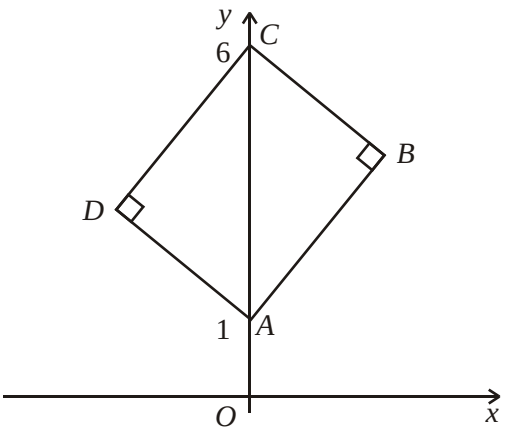


Diagram **NOT** accurately drawn

ABCD is a rectangle.
A is the point (0, 1).
C is the point (0, 6).
The equation of the straight line through *A* and *B* is $y = 2x + 1$

(a) Find the equation of the straight line through *D* and *C*.

.....

(2)
(Total 2 marks)

7. The straight line $\mathbf{L}_1$ has equation $y = 2x + 3$
The straight line $\mathbf{L}_2$ is parallel to the straight line $\mathbf{L}_1$.
The straight line $\mathbf{L}_2$ passes through the point (3, 2).
Find an equation of the straight line $\mathbf{L}_2$.

.....

(Total 3 marks)

8. A straight line has equation $2y - 6x = 5$

(a) Find the gradient of the line.

……..

(2)

The point (k, 6) lies on the line.

(b) Find the value of k.

k = ……..

(2)
(Total 4 marks)

9. Find the equation of the straight line that passes through each of the following sets of points leaving your answer in the form y = mx + c.

(a) A(2,3) and B(6,11) (b) E(-4,-5) and F(-6,0)

(4)

(4)
(Total 8 marks)

Total marks for exercise 29