

# Straight Lines

Name:	Class:	Date:
		Mark / 14 %

1) Find the gradient of the line [3]

a)  $y = -2x - 1$

b)  $y = \frac{7}{2} + 5x$

c)  $-6x - y - 9 = 0$

2) Find the  $y$  intercept of the line [1]

$$y = \frac{7}{4} - 9x$$

3) Write the line into the general form  $ax + by + c = 0$  [1]

$$y = -10x + 7$$

4) The line  $y = -4x - 20$  meets the  $x$ -axis at the point  $P$ . Work out the coordinates of  $P$ . [1]

5) A line is parallel to the line  $y = 8x + 9$  and its intercept on the  $y$  axis is  $(0, -3)$ . Work out the equation of the line leaving you answer in the form  $ax + by + c = 0$ .

6) Find the gradient given the following two points [1]

$(6, 30)$  and  $(5, 40)$  [1]

7) The line joining  $(-4, -6)$  and  $(e, -1)$  has a gradient  $\frac{5}{6}$ . Work out the value of  $e$ . [1]

8) The line  $P$  has gradient  $-2$  and passes through the point  $(-3, 4)$ . The line  $Q$  has gradient  $\frac{1}{2}$  and passes through the point  $(2, -3)$ . The line  $P$  meets the  $x$ -axis at  $A$  and the line  $Q$  meets the  $y$ -axis at  $B$ . Find the equation of the line that passes through the point  $A$  and  $B$ .

[1]

9) Find the equation of the line given the following two points

[1]

$(7, -4)$  and  $(-12, 15)$

10) Which of the following lines is perpendicular to  $y = \frac{1}{2}x + 3$ .

[1]

- A.  $y = -2x + 8$       B.  $y = -\frac{1}{2}x + 3$   
C.  $y = \frac{1}{2}x + 8$       D.  $y = 2x + 3$

11) Find an equation of the line that is perpendicular to  $y = \frac{6}{7}x + 1$  and passes through the point  $(-6, 2)$ . [1]

12) The line  $d$  passes through the points  $(-5, 4)$  and  $(-7, 8)$  and the line  $e$  passes through the points  $(-2, -5)$  and  $(1, 13)$ . Are the lines  $d$  and  $e$  parallel?

[1]

## Solutions for the assessment Straight Lines

1) a) Gradient =  $-2$

b) Gradient =  $5$

c) Gradient =  $-6$

2)  $y$  intercept =  $\frac{7}{4}$

3)  $10x + y - 7 = 0$

4)  $P = (-5, 0)$

5)  $8x - y - 3 = 0$

6)  $-10$

7)  $2$

8)  $y = -4x - 4$

9)  $y = -x + 3$

10)  $A$

11)  $y = -\frac{7}{6}x - 5$

12) No