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Year 10 MathsB Homework Sheet No. 21

To be completed on loose-leaf paper.

Due date: _____

(1) Solve for y in these equations.

(a) $3y - 2 = 10$ (b) $\frac{2y - 3}{5} = 3$

(2) Solve for c in these equations.

(a) $3c + 1 = 10$ (b) $\frac{c}{2} - 5 = -9$

(3) Find the following numbers.

(a) When this number is added to five, the answer is thirteen.

(b) When this number is subtracted from three, the answer is negative six.

(c) When six is subtracted from twice this number, the answer is four.

(4) Find the value of a and b if:

$2a + b = 19$ and $a - b = 5$

(Simultaneous equations) Elimination

(5) Complete the table below, stating the gradient and y-intercept of the straight lines with the following equations.

A $y = 3x + 1$ **B** $y = -3$

C $y = -x + 3$ **D** $y = 2 - 5x$

E $y = \frac{x}{4} - 2$ **F** $y = 3(x - 4)$

G $y - x = 4$ **H** $y + 2x + 1 = 0$

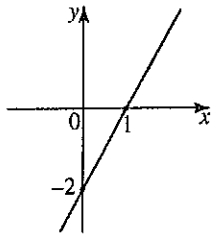
Equation	Gradient	y-intercept
A		
B		
C		
D		
E		
F		
G		
H		

(6) Complete this table. (Use your calculator)

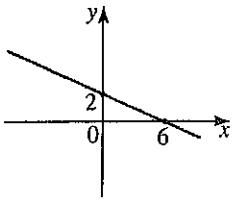
Angle in deg, min, sec	Angle as a decimal
$53^\circ\ 33'\ 36''$	
	27.87°

(7) Write the equation of each of the following lines ($y = mx + c$)

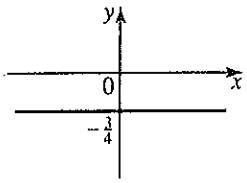
(a)



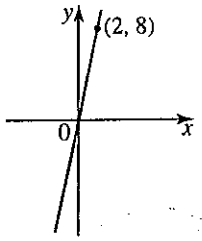
(b)



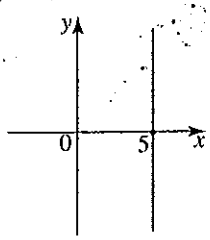
(c)



(d)



(e)



(8) Find the gradients of the lines passing through each pair of points.

(a) (0, 2) and (3, 11). (b) (-2, 1) and (4, -11)

Answers:

(1) (a) 4
(b) 9

(2) (a) 3
(b) -8

(3) (a) 8
(b) 9
(c) 5

(4) $a = 8$
$b = 3$

(7) (a) $y = 2x - 2$ (e) $x = 5$
(b) $y = -\frac{2}{3}x + 2$ (8) (a) 3
(c) $y = -3/4$ (b) -2
(d) $y = 8x + 2$