



Year 10 Maths B Homework Sheet No.13

To be completed on loose-leaf paper.
Show FULL working out.



Aims:

- To provide ongoing revision of skills and concepts
- To develop procedural knowledge and fluency.

Need help? →

- 1 a $2 - 3p = 5$ b $-5x + 3 = -2$
- 2 a $\frac{x}{2} + 3 = 4$ b $\frac{x}{3} - 1 = 4$ c $\frac{x}{4} + 3 = 2$
- 3 a $\frac{4x + 5}{3} = -13$ b $\frac{6x - 3}{5} = 9$ c $\frac{4x}{3} + 2 = 6$ d $\frac{2x}{5} - 1 = -3$
- 4 a $2(x - 8) = -25$ b $-4(3 - x) = 2$ c $4(x - 5) - 2(x - 1) = 4$

5 If five is added to a number and the result is multiplied by four the answer is twenty-four. Write an equation and solve it to find the number.

6 Three students produce different steps of working to solve $6x + 11 = 2x - 13$.

Andrew

$6x + 11 = 2x - 13$
$6x + 11 - 2x = 2x - 13 - 2x$
$8x + 11 = -13$
$8x + 11 - 11 = -13 - 11$
$8x = -24$
$\frac{8x}{8} = \frac{-24}{8}$
$x = -3$

Hayley

$6x + 11 = 2x - 13$
$6x + 11 = 2x - 13 - 2x$
$6x + 11 = -13$
$6x + 11 - 11 = -13 - 11$
$6x = -24$
$\frac{6x}{6} = \frac{-24}{6}$
$x = -4$

Alex

$6x + 11 = 2x - 13$
$6x + 11 - 2x = 2x - 13 - 2x$
$4x + 11 = 13$
$4x + 11 - 11 = 13 - 11$
$4x = 2$
$\frac{4x}{4} = \frac{2}{4}$
$x = \frac{1}{2}$

- a Check each student's work. Has the equation been solved correctly? What mistakes have been made?
b Solve the equation correctly. Show your working.

7 Draw up a Cartesian plane and use the table of values to **plot the graph** of each relationship between x and y.

i

x	-3	-2	-1	0	1	2	3
y	-1	0	1	2	3	4	5

ii

x	-3	-2	-1	0	1	2	3
y	-5	0	3	4	3	0	-5

8 For each linear relationship described by the given equation, copy and complete the table **and** plot the graph.

a $y = x + 1$

x	-2	-1	0	1	2
y	-1		1		3

b $y = 3 - x$

x	-1	0	1	2	3
y	4			1	

ANSWERS: You must show the mathematics used to get these answers. Simply writing the answer is not enough.

1 a) -1 b) 1, 2 a) 2 b) 15 c) -4, 3 a) -11 b) 8 c) 3 d) -5, 4 a) -4.5 b) 3.5 c) 11, 5 1.