

1. Here is an arithmetic sequence.

$$-1, 4, 9, 14, 19, 24, 29, \dots, \dots$$

(i) Write down the next two terms

$$5n - 6$$

(ii) What is the Nth term

$$94$$

(iii) What is the 20<sup>th</sup> term in the sequence

(5 marks)

2.

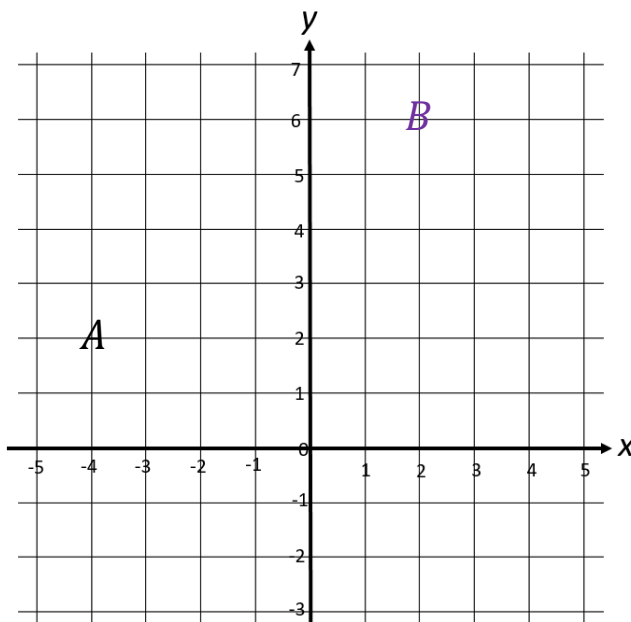
(a) Write down the coordinate A

$$(-4, 2)$$

(b) Plot the coordinate B ( 2 , 6 )

(c) Write down the midpoint of AB

$$(-1, 4)$$



(4 marks)

3. Simplify  $4g + 2h + 8 + 5g - 6h + 3$

$$9g - 4h + 11$$

(2 marks)

4. Simplify  $8e \times f \times 6f$

$$48ef^2$$

(1 mark)

5.  $a = 5$     $b = 0.5$     $c = -2$

Work out the value of  $6a - 2b + 3c$

$$23$$

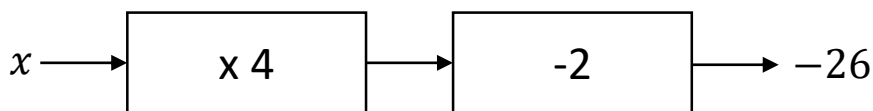
(2 marks)

6. Simplify  $\frac{3x^4 \times 4x^5}{2x^2}$

$$6y^7$$

(2 marks)

7. Calculate



$x = \dots\dots\dots -8$   
(1 mark)

8. Simplify  $6m^5 + 8m^5 - 2m^5$

$\dots\dots\dots 12m^5$   
(1 mark)

9. Expand and simplify  $2(x + 3) + 3(2x + 5)$

$\dots\dots\dots 8x + 21$   
(2 marks)

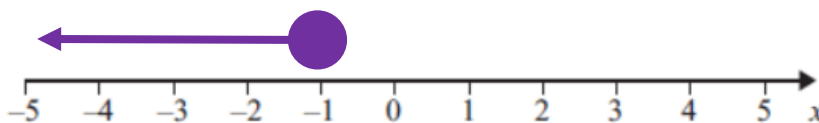
10. Factorise  $x^2 - 4x$

$\dots\dots\dots x(x - 4)$   
(2 marks)

11. Solve  $2x - 5 = 9$

$x = \dots\dots\dots 7$   
(2 marks)

12. Show the inequality  $3x \leq -3$  on the number line below.

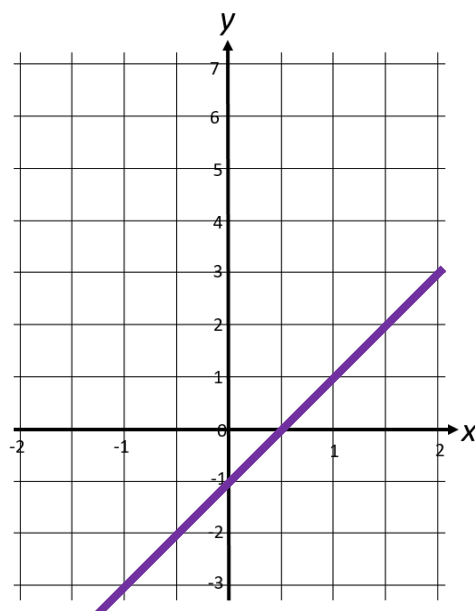


(2 marks)

13. Complete the table of values for  $y = 2x - 1$

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

On the grid draw the graph of  $y = 2x - 1$



(4 marks)

Score =