

1. Here is an arithmetic sequence.

$$1, 5, 9, 13, 17, 21, 25, \dots$$

(i) Write down the next two terms

$$4n - 3$$

(ii) What is the Nth term

$$117$$

(iii) What is the 30<sup>th</sup> term in the sequence

(5 marks)

2.

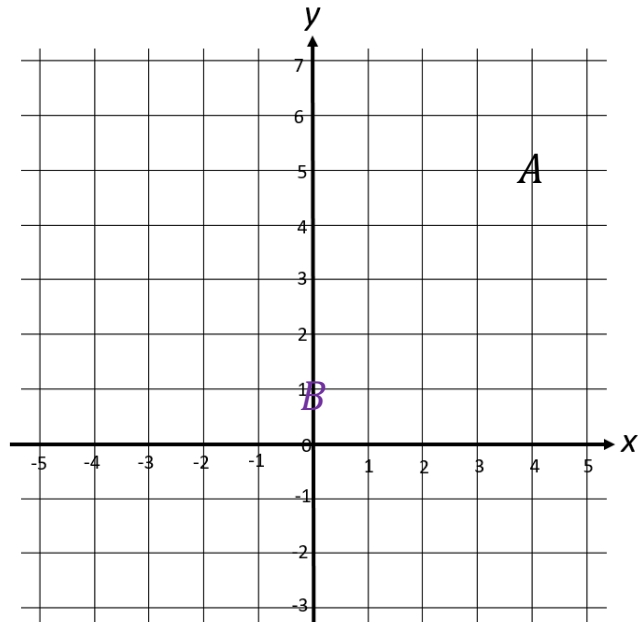
(a) Write down the coordinate A

$$(4, 5)$$

(b) Plot the coordinate B ( 0 , 1 )

(c) Write down the midpoint of AB

$$(2, 3)$$



(4 marks)

3. Simplify  $4g + 8g^2 - 2g + 5g^2$

$$2g + 13g^2$$

(1 mark)

4. Simplify  $6a \times 5b$

$$30ab$$

(1 mark)

5.  $a = 3$     $b = 4$     $c = -1$

Work out the value of  $ab - 3c$

$$15$$

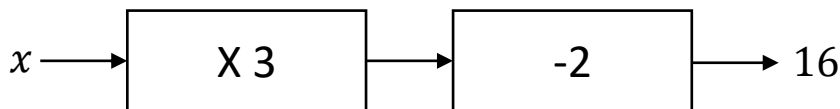
(2 marks)

6. Simplify  $(a^4)^3$

$$a^{12}$$

(1 mark)

7. Calculate



$x = \dots\dots\dots 6$   
(1 mark)

8. Simplify  $h^3 + 2h^3 + h^3$

$\dots\dots\dots 4h^3$   
(1 mark)

9. Expand  $x(x + 3)$

$\dots\dots\dots x^2 + 3x$   
(1 mark)

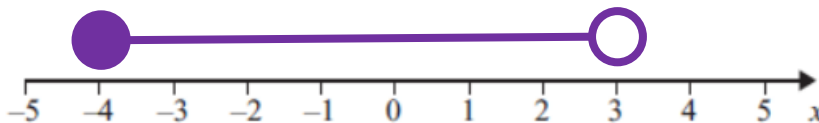
10. Factorise  $30x + 15$

$\dots\dots\dots 5(6x + 3)$   
(2 marks)

11. Solve  $3x - 1 = 14$

$x = \dots\dots\dots 5$   
(2 marks)

12. Show the inequality  $-4 \leq x < 3$  on the number line below.

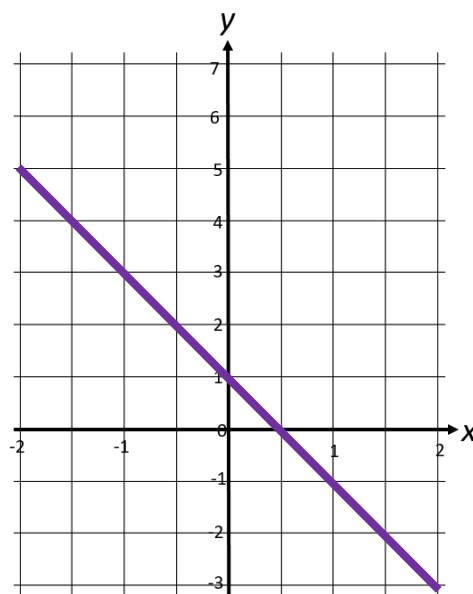


(2 marks)

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 =