

1. Here is an arithmetic sequence.

$$-1, 3, 7, 11, 15, \dots$$

Find the Nth term.

.....

(1) Find the 10th term in the sequence?

.....

(3 marks)

2. Coordinates of point A are  $(-2, 5)$  and coordinate B =  $(-4, 11)$ .

Write down the gradient of line segment AB.

.....

(2 marks)

3. Simplify  $2c - 3 + 6c + 7$

.....

(2 marks)

4. Simplify  $4h^2 + 3h^2 + 2h^2$

.....

(1 mark)

5.  $a = 5$   $b = 3$   $c = -2$

Work out the value of  $ab + 2c$

.....

(2 marks)

6. Simplify  $9y^{-3} \times 4y^2$

.....

(2 marks)

7. Simplify  $\frac{24e^{-4}}{4e^4}$

.....

(2 marks)

8. Simplify  $(7y^{-2})^2$

.....

9. Simplify  $\frac{6a^4 \times 2a^6}{3a^2}$

.....

(2 marks)

10. Expand  $a(3a + 5)$

.....  
(1 mark)

11. Simplify  $9 - 9$

.....  
(2 marks)

12. Expand  $(2x + 1)(x + 5)$

.....  
(2 marks)

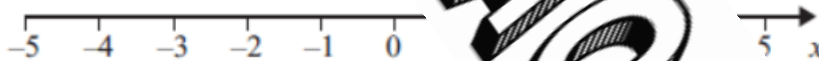
13. Factorise  $x^2 - 9$

.....  
(2 marks)

14. Solve  $4x + 15 = 3$

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

15. Show the inequality  $x - 3 \geq 0$  on the line below.

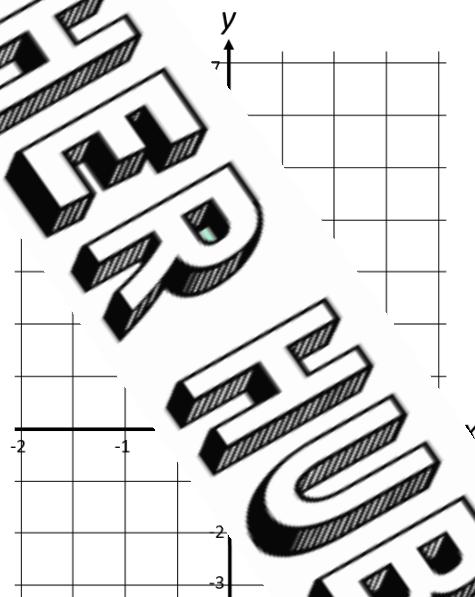


.....  
(2 marks)

16. Complete the table of values for  $y = 2x + 1$

$x$	-2	-1	0	1	2
$y$					

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



.....  
(2 marks)

Score =