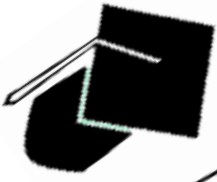


1. Here is a quadratic sequence.

4, 7, 12, 19, 28,



(1) Find the n th term.
(3 marks)

2. Coordinates of point A are $(-2, 1)$ and coordinate B = $(3, 13)$.

Write down the gradient of line AB.
(2 marks)

3. Simplify $3m + 2m - 5m$
(2 marks)

4. Simplify $3x^2 + 8x^2 - 5x^2$
(1 mark)

5. $a = 5$ $b = 3$ $c = -2$
Work out the value of $ab + 2c$
(2 marks)

6. Simplify $6h^{-3} \times 7h^{-5}$
(2 marks)

7. Simplify $\frac{36e^{-15}}{9e^{-3}}$
(2 marks)

8. Simplify $(2t^7)^3$
(2 marks)

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

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10. Expand $4n(5n - 4)$

.....
(1 mark)

11. Expand $(u + 7)(u - 7)$

.....
(2 marks)

12. Expand $(2x + 3)(x + 2)$

.....
(2 marks)

13. Factorise $x^2 - 4$

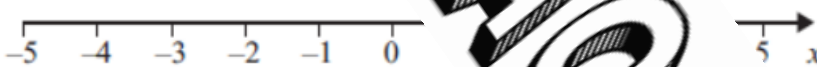
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(2 marks)

14. Solve $7x - 5 = 20$

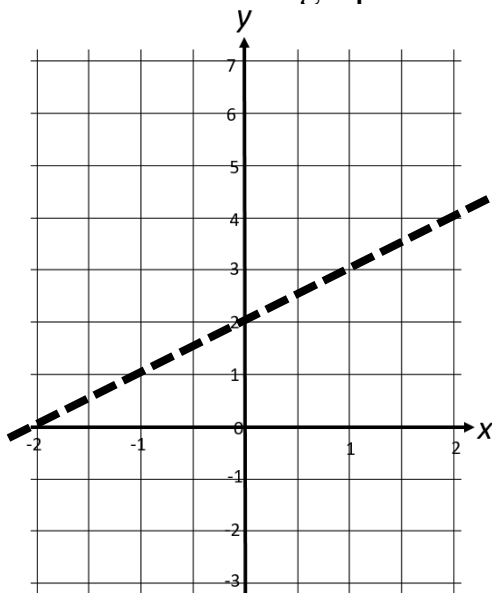
$x =$
(2 marks)

15. Show the inequality $3x > -6$ on the number line below.



.....
(2 marks)

16. Below is a linear graph.



(i) Write down the gradient.

.....

(ii) Write down the y-intercept.

.....

(iii) Write down the equation of the line.

.....

.....
(2 marks)

Score =