Higher Homework 16 : Algebra

1. Here is a quadratic sequence.

$$4\ ,7\ ,12\ ,19\ ,28\ ,$$

(i) Write down the Nth term. .....

(3 marks)

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2. Coordinate A = (-5 , 7) and coordinate B = (-3 , 13).

Write down the midpoint of AB

.....

(2 marks)

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3. Simplify $3m + 7 + 5m^2 + 2 + 5m - 2m^2$

.....

(2 marks)

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4. Simplify $3x^2 + 8x^2 - 4x^2$

.....

(1 mark)

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

Work out the value of $ab + 2c$

.....

(2 marks)

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6. Simplify $6h^{-3} \times 7h^{-5}$

.....

(2 marks)

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7. Simplify $\dfrac{36e^{-15}}{9e^{-3}}$

.....

(2 marks)

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

.....

(2 marks)

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

.....

(2 marks)

Higher Homework 16 : Algebra

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

……

(1 mark)

11. Factorise $y^2 - 7u$

……

(2 marks)

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

……

(2 marks)

13. Factorise $x^2 + 2x - 15$

……

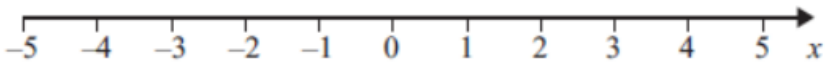
(2 marks)

14. Solve $7x - 5 = 3x + 11$

x =……

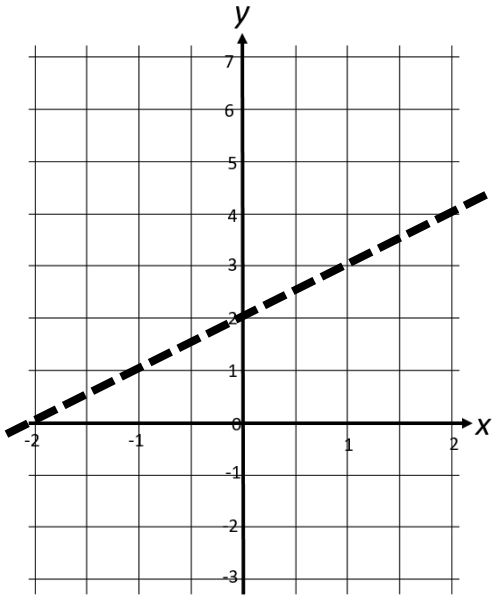
(2 marks)

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.

… … … … … … … … … .

(4 marks)

Score =