

Algebra: Quadratics, Rearranging Formulae and Identities

Non-Calculator 20 minute test 2

Answer all questions.

- 1 Rearrange $d = 3c + 12$ to make c the subject.

[2 marks]

Answer _____

- 2 Simplify fully $(2xy)^3 \times 5x^5y^3$

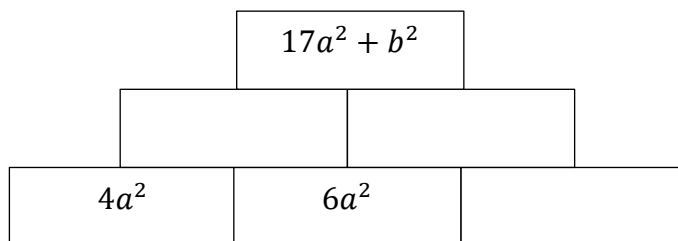
[2 marks]

Answer _____

- 3 To get the expression in each brick, add together the two expressions directly below it.

Complete this algebra pyramid.

[4 marks]



4 Factorise $x^2 - 6x - 7$

[2 marks]

Answer _____

5 (a) Expand $(y - 5)(y - 9)$

[2 marks]

Answer _____

5 (b) Hence or otherwise, simplify $(\sqrt{2} - 5)(\sqrt{2} - 9)$.
Write your answer in terms of $\sqrt{2}$.

[2 marks]

Answer _____

6 A teacher uses the following formula to work out how long it takes to mark homework (T minutes):

$$T = 12h + 5$$

where h is number of pieces of homework.

Work out the time taken in minutes to mark 30 pieces of homework.

[2 marks]

Answer _____ minutes

7 Rearrange $x^2 = h^2 - y^2$ to make h the subject.

[2 marks]

Answer _____

8 Show that $(3x + 5)(x - 1) - (2x + 3)(x - 1) \equiv (x - 1)(x + 2)$

[3 marks]

Answer _____