

Difference of two squares

Grade 6 | Higher | 12 questions, 36 marks

GCSE Maths topic practice



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Name: _____

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1 Factorise $x^2 - 49$

(1 mark)

Answer _____

2 a. Factorise $m^2 - 64$

b. Factorise $k^2 - 100$

(2 marks)

Answer _____

3 Factorise $4x^2 - 25$

(2 marks)

Answer _____

4 Use the difference of two squares to work out these without a calculator.

a. $99^2 - 1^2$

b. $73^2 - 27^2$

(3 marks)

Answer _____

5 Factorise fully $2x^2 - 50$

(3 marks)

Answer _____

6

Simplify fully $\frac{x^2 - 9}{2x + 6}$

(3 marks)

Answer _____

7

Solve $4x^2 - 49 = 0$

(3 marks)

Answer _____

8

Without working out the squares, show that

$$53^2 - 47^2 = 600$$

(3 marks)

Answer _____

9

Simplify fully $\frac{x^2 - 16}{x^2 + x - 12}$

(4 marks)

Answer _____

10

Show that $(2n + 1)^2 - (2n - 1)^2$ is a multiple of 8 for every integer n .

(3 marks)

Answer _____

11

a. Factorise $y^2 - 25$ b. Hence, or otherwise, expand and simplify $(y + 5)(y - 5)(2y + 3)$

(5 marks)

Answer _____

12

a. Expand and simplify $(y + 7)(y - 7)$ b. Factorise $x^2 + x - 30$

(4 marks)

Answer _____

End of questions | Total 36 marks