

Expanding and Factorising Quadratics

GCSE Mathematics • **Foundation Tier** • Grades 3–5 • Non-calculator

Name:

Class:

Total: / 47

Show all your working. Marks are given for correct method as well as the final answer.

1. Expand $3(x + 5)$. [2 marks]

Answer:

2. Expand $x(x - 4)$. [2 marks]

Answer:

3. Expand $2x(3x + 7)$. [2 marks]

Answer:

4. Expand and simplify $(x + 2)(x + 5)$. [2 marks]

Answer:

5. Expand and simplify $(x + 7)(x - 3)$. [2 marks]

Answer:

6. Expand and simplify $(x - 4)(x - 6)$. [2 marks]

Answer:

7. Expand and simplify $(2x + 1)(x + 4)$. [2 marks]

Answer:

8. Expand and simplify $(x + 5)^2$. [2 marks]

Answer:

9. Expand and simplify $(x - 3)^2$. [2 marks]

Answer:

10. Expand and simplify $(x + 4)(x - 4)$. What do you notice? [2 marks]

Answer:

11. Factorise $x^2 + 7x$. [2 marks]

Answer:

12. Factorise fully $6x^2 - 9x$. [2 marks]

Answer:

13. Factorise $x^2 + 8x + 15$. [2 marks]

Answer:

14. Factorise $x^2 - 9x + 20$. [2 marks]

Answer:

15. Factorise $x^2 + 2x - 15$. [2 marks]

Answer:

16. Factorise $x^2 - 3x - 28$. [2 marks]

Answer:

17. Factorise $x^2 - 36$. [2 marks]

Answer:

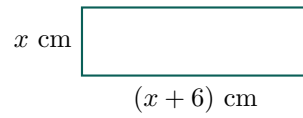
18. Solve $(x - 2)(x + 9) = 0$. [2 marks]

Answer:

19. Solve $x^2 + 5x + 6 = 0$ by factorising. [3 marks]

Answer:

20. Here is a rectangle. Its area is 27 cm^2 .



(a) Show that the area is $x^2 + 6x$. [2 marks]

(b) Show that $x^2 + 6x - 27 = 0$, then factorise the left-hand side. [3 marks]

(c) Find the value of x , explaining why you reject one solution. [3 marks]

Answer: cm