ENGLAND GCSE MATHS EDEXCEL FOUNDATION · UNIT 3 · 25 QUESTIONS

Algebra, Notation, Vocabulary and Manipulation — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A sandwich costs s pounds. The cost, in pounds, of 5 sandwiches and a £4 drink is**

- **A** 6s + 4
- **B** 5s + 4
- **C** 5s - 4
- **D** 5(s + 4)

Understand It with Pulse | Flag a mistake

2 **A hardcover book costs b pounds. The cost, in pounds, of 5 hardcover books is**

- A $5b$
- B b^5
- C $b + 5$
- D $5b^2$

Understand It with Pulse | Flag a mistake

3 **A tennis ball costs a pounds. The total cost, in pounds, of 3 tennis balls is**

- A $a + 3$
- B $3a^2$
- C $3a$
- D a^3

Understand It with Pulse | Flag a mistake

4 **The height of a rocket, in metres, after t seconds is $h = 15t - 5t^2$. When t = 1, the height is**

- A 10
- B 5
- C 20
- D 15

Understand It with Pulse | Flag a mistake

5 **Write in its simplest form 2p + 5b + 2p - 2b, where p is the number of paintbrushes and b is the number of hardcover books.**

- A 3b
- B 4p
- C 4p + 7b
- D 4p + 3b

Understand It with Pulse | Flag a mistake

6 **Write in its simplest form 4a + 5b + 3a - b, where a is the number of red apples and b is the number of lemons.**

- A 4b
- B 7a
- C 7a + 4b
- D 7a + 6b

Understand It with Pulse | Flag a mistake

7 **Write in its simplest form 6a + 3b - a + 3b**

- A 7a + 6b
- B 5a + 6b
- C 5b + 6a
- D 5a

Understand It with Pulse | Flag a mistake

8 $(x^2)^3$ is equal to

A x^8

B x^7

C x^5

D x^6

Understand It with Pulse | Flag a mistake

9 Factorise $x^2 + x - 6$

A $(x - 2)(x + 3)$

B $(x + 2)(x + 3)$

C $(x - 2)(x - 3)$

D $(x + 2)(x - 3)$

Understand It with Pulse | Flag a mistake

10 **Multiply out $(x + 5)^2$**

- A $x^2 + 10x - 25$
- B $x^2 + 10x + 25$
- C $x^2 + 25$
- D $x^2 + 5x + 25$

Understand It with Pulse | Flag a mistake

11 **If $x = 3$, the value of $3x^2 - 4$ is**

- A 23
- B 5
- C 41
- D 31

Understand It with Pulse | Flag a mistake

12 **Multiply out (x - 1)(x + 6)**

- A $x^2 - 5x - 6$
- B $x^2 + 5x + 6$
- C $x^2 + 5x - 6$
- D $x^2 - 7x - 6$

Understand It with Pulse | Flag a mistake

13 **Factorise $6x^2 - 12x$**

- A $3(x^2 - 2x)$
- B $6x(x + 2)$
- C $6x(x - 2)$
- D $x(6x - 2)$

Understand It with Pulse | Flag a mistake

14 **Multiply out 5x(3x - 3)**

- A $15x^2 - 3x$
- B $15x^2 - 15x$
- C $8x^2 - 15x$
- D $15x^2 + 15x$

Understand It with Pulse | Flag a mistake

15 **Write in its simplest form** $\frac{6x}{6}$

- A x^2
- B $2x$
- C x
- D $\frac{x}{2}$

Understand It with Pulse | Flag a mistake

16 **Write in its simplest form 5a + 4b - 4a + 3b**

A a + 7b

B b + 7a

C 9a + 7b

D a + b

Understand It with Pulse | Flag a mistake

17 $\frac{x^6}{x^2}$ **is equal to**

A x^{12}

B x^3

C x^8

D x^4

Understand It with Pulse | Flag a mistake

18 Factorise $x^2 - 16$

A $(x - 4)(x + 4)$

B $(x + 4)(x - 4)$

C $(x - 4)(x - 4)$

D $(x + 4)(x + 4)$

Understand It with Pulse | Flag a mistake

19 Multiply out $(x - 5)^2$

A $x^2 + 25$

B $x^2 - 10x - 25$

C $x^2 - 5x + 25$

D $x^2 - 10x + 25$

Understand It with Pulse | Flag a mistake

20 **If x = 4, the value of $4x^2 - 1$ is**

- A 65
- B 95
- C 15
- D 63

Understand It with Pulse | Flag a mistake

21 **Write an expression for 8 less than 5 times a number x**

- A 5x - 8
- B 8 - 5x
- C 5x + 8
- D 8x - 5

Understand It with Pulse | Flag a mistake

22 **Multiply out (x - 3)(x + 5)**

A $x^2 + 2x - 15$

B $x^2 - 8x - 15$

C $x^2 - 2x - 15$

D $x^2 + 2x + 15$

Understand It with Pulse | Flag a mistake

23 **Factorise 6x + 24**

A 6(x - 4)

B 6(x + 24)

C x(6 + 4)

D 6(x + 4)

Understand It with Pulse | Flag a mistake

24 **Multiply out 4x(4x - 3)**

- A $8x^2 - 12x$
- B $16x^2 - 3x$
- C $16x^2 - 12x$
- D $16x^2 + 12x$

Understand It with Pulse | Flag a mistake

25 **Write in its simplest form** $\frac{6x^2}{2x}$

- A x
- B 3x
- C $3x^2$
- D $\frac{x}{3}$

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. B
2. A
3. C
4. A
5. D
6. C
7. B
8. D
9. A
10. B
11. A
12. C
13. C
14. B
15. C
16. A
17. D
18. A
19. D
20. D
21. A
22. A
23. D
24. C
25. B

© 2026 Brett Robbins. All Rights Reserved.