ENGLAND GCSE MATHS AQA 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 tennis ball costs a pounds. The total cost, in pounds, of 4 tennis balls is**

- **A** $4a$
- **B** a^4
- **C** $a + 4$
- **D** $4a^2$

Understand It with Pulse | Flag a mistake

2 **The height of a rocket, in metres, after t seconds is $h = 20t - 5t^2$. When t = 2, the height is**

- A 25
- B 20
- C 40
- D 15

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

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

Understand It with Pulse | Flag a mistake

4 **Simplify 3p + 3b + 2p - b, where p is the number of paintbrushes and b is the number of hardcover books.**

A 2b

B 5p

C 5p + 2b

D 5p + 4b

Understand It with Pulse | Flag a mistake

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

A b + 5

B $5b^2$

C b^5

D 5b

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6 **Simplify 2a + 4b + 2a - b, where a is the number of red apples and b is the number of lemons.**

A 4a

B 4a + 5b

C 4a + 3b

D 3b

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7 **Factorise $x^2 - 9x + 18$**

A $(x + 6)(x + 3)$

B $(x - 6)(x - 3)$

C $(x + 6)(x - 3)$

D $(x - 6)(x + 3)$

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

A 2

B 26

C 14

D 22

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9 **Expand $(x + 4)(x - 6)$**

A $x^2 - 2x + 24$

B $x^2 - 2x - 24$

C $x^2 + 10x - 24$

D $x^2 + 2x - 24$

Understand It with Pulse | Flag a mistake

10 **Factorise 5x + 25**

- A 5(x + 25)
- B x(5 + 5)
- C 5(x + 5)
- D 5(x - 5)

Understand It with Pulse | Flag a mistake

11 **Expand $(x - 4)^2$**

- A $x^2 + 16$
- B $x^2 - 8x - 16$
- C $x^2 - 4x + 16$
- D $x^2 - 8x + 16$

Understand It with Pulse | Flag a mistake

12 **Write an expression for 6 more than 5 times a number x**

- **A** $5x \times 6$
- **B** $5x - 6$
- **C** $6x + 5$
- **D** $5x + 6$

Understand It with Pulse | Flag a mistake

13 **Simplify** $\frac{15x^2}{5x}$

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

Understand It with Pulse | Flag a mistake

14 **$x^3 \times x^3$ is equal to**

A x^9

B x^7

C x^0

D x^6

Understand It with Pulse | Flag a mistake

15 **Simplify 3a + 4b - 2a + 4b**

A a

B b + 8a

C 5a + 8b

D a + 8b

Understand It with Pulse | Flag a mistake

16 **Expand 5x(2x - 2)**

A $10x^2 - 2x$

B $10x^2 + 10x$

C $10x^2 - 10x$

D $7x^2 - 10x$

Understand It with Pulse | Flag a mistake

17 **Factorise $x^2 - 7x + 6$**

A $(x + 6)(x - 1)$

B $(x - 6)(x + 1)$

C $(x - 6)(x - 1)$

D $(x + 6)(x + 1)$

Understand It with Pulse | Flag a mistake

18 **If $x = 4$, the value of $3x^2 - 1$ is**

- A 47
- B 71
- C 11
- D 49

Understand It with Pulse | Flag a mistake

19 **Expand $(x + 5)(x - 4)$**

- A $x^2 - x - 20$
- B $x^2 + x - 20$
- C $x^2 + 9x - 20$
- D $x^2 + x + 20$

Understand It with Pulse | Flag a mistake

20 **Factorise 6x + 18**

- A 6(x + 18)
- B 6(x + 3)
- C 6(x - 3)
- D x(6 + 3)

Understand It with Pulse | Flag a mistake

21 **Expand $(x - 2)^2$**

- A $x^2 - 2x + 4$
- B $x^2 - 4x - 4$
- C $x^2 + 4$
- D $x^2 - 4x + 4$

Understand It with Pulse | Flag a mistake

22 **Write an expression for 5 more than 4 times a number x**

- **A** $5x + 4$
- **B** $4x + 5$
- **C** $4x - 5$
- **D** $4x \times 5$

Understand It with Pulse | Flag a mistake

23 **Simplify** $\frac{10x}{10}$

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

Understand It with Pulse | Flag a mistake

24 $\frac{x^6}{x^4}$ is equal to

A x^1

B x^{10}

C x^2

D x^{24}

Understand It with Pulse | Flag a mistake

25 Simplify 7a + 7b - 3a + 3b

A 4a + 10b

B 4a + 4b

C 10a + 10b

D 4b + 10a

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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