ENGLAND GCSE MATHS OCR HIGHER · UNIT 3 · 10 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 5 tennis balls is**

- **A** $5a$
- **B** a^5
- **C** $a + 5$
- **D** $5a^2$

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

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

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3 **Give your answer in its simplest form 3p + 3b + 2p - b, where p is the number of paintbrushes and b is the number of hardcover books.**

- A 5p + 4b
- B 5p
- C 5p + 2b
- D 2b

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4 **A sandwich costs s pounds. The cost, in pounds, of 6 sandwiches and a £4 drink is**

- A 6(s + 4)
- B 7s + 4
- C 6s + 4
- D 6s - 4

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5 **Write an expression for 8 more than 3 times a number x**

- A 3x - 8
- B 3x + 8
- C 3x × 8
- D 8x + 3

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6 **Give your answer in its simplest form 3a + 3b - a + 5b**

A 4a + 8b

B 2b + 8a

C 2a - 2b

D 2a + 8b

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

A (x + 1)(x - 6)

B (x - 1)(x + 6)

C (x + 1)(x + 6)

D (x - 1)(x - 6)

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8 **Given $f(x) = 3x + 3$ and $g(x) = x^2$, the value of $(g \circ f)(2)$ is**

- **A** 9
- **B** 82
- **C** 39
- **D** 81

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9 **The inverse of $f(x) = 2x + 2$ is**

- **A** $f^{-1}(x) = x - 2/2$
- **B** $f^{-1}(x) = 2x - 2$
- **C** $f^{-1}(x) = x + 2/2$
- **D** $f^{-1}(x) = x/2 + 2$

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

A 93

B 13

C 61

D 67

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ANSWER KEY

1.	A	**5.**	B	**9.**	A
2.	D	**6.**	D	**10.**	C
3.	C	**7.**	D		
4.	C	**8.**	D		

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