ENGLAND GCSE MATHS OCR HIGHER · UNIT 4 · 10 QUESTIONS

Algebra, Graphs — 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 sunflower grows 3 cm every week. The gradient of its height-time graph is**

- **A** 2
- **B** 3
- **C** 6
- **D** 4

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2 A wooden footbridge rises 3 m over a run of 9 m. Its gradient is

- **A** $\frac{1}{3}$
- **B** 3
- **C** $\frac{1}{4}$
- **D** $\frac{2}{3}$

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3 The midpoint of the line joining (4, 0) and (6, 2) is

- **A** (5, 1)
- **B** (1, 1)
- **C** (6, 0)
- **D** (4, 2)

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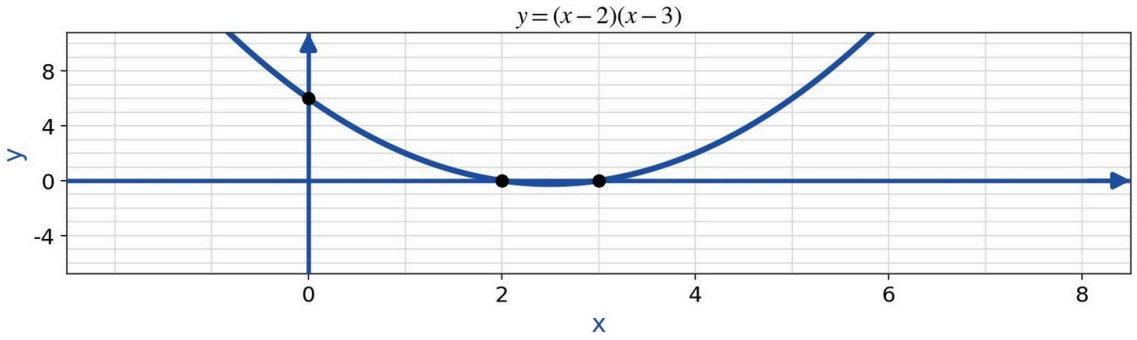
4 **The graph shows y = x² - 5x + 6. The roots of the equation x² - 5x + 6 = 0 are**



A x = 2 and x = 3

B x = 3 and x = 3

C x = 2 and x = -3

D x = -2 and x = -3

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5 **The circle $x^2 + y^2 = 36$ has radius**

A 6

B 36

C 12

D 7

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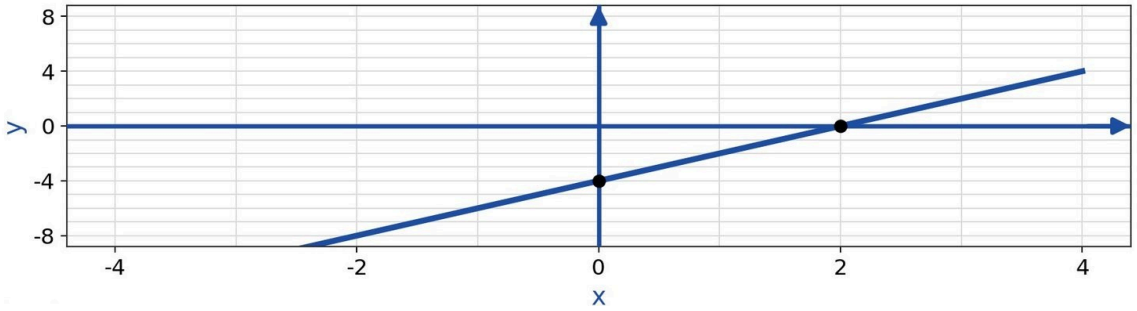
6 **The graph shows a straight line through (0, -4). The gradient of the line is**



A 3

B -2

C 2

D -4

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7 **The turning point of $y = (x - 2)^2 + 1$ is**

- A (-2, 1)
- B (2, 1)
- C (2, -1)
- D (1, 0)

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8 **A line is perpendicular to $y = 1/2x + 1$. The gradient of the perpendicular line is**

- A $\frac{1}{2}$
- B -2
- C -1/2
- D 2

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9 The graph of $y = 2^x$ passes through the point with $x = 3$. The value of y is

- A 7
- B 6
- C 8
- D 16

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10 A kite string has gradient $\frac{5}{4}$. It goes 8 m across. How high is the kite?

- A 10
- B 15
- C 5
- D 8

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ANSWER KEY

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

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