ENGLAND GCSE MATHS OCR FOUNDATION · UNIT 5 · 25 QUESTIONS

Algebra, Equations and Inequalities — 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 bicycle costs x pounds. After a £10 discount it costs £80. The value of x is**

- A £100
- B £70
- C £90
- D £80

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2 **A sandwich costs x pounds. 4 sandwiches cost £24. The value of x is**

A £7

B £6

C £5

D £24

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3 **A tennis ball costs x pounds. A tube of 4 tennis balls costs £12. The value of x is**

A £12

B £4

C £3

D £2

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4 **A guitar costs x pounds. Two guitars and a £20 case cost £110. The value of x is**

- A £50
- B £90
- C £45
- D £40

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5 **A cup of coffee costs x pounds. 3 cups of coffee cost £9. The value of x is**

- A £3
- B £4
- C £2
- D £9

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6 **Two hardcover books and one calculator cost £10. One hardcover book and two calculators cost £8. The cost of one calculator is**

- A £2
- B £3
- C £4
- D £1

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7 **The formula v = u + at gives v = 19 when u = 7, a = 2 and t = 6. Rearrange the formula to make t the subject.**

- A t = v + u/a
- B t = v - u/a
- C t = v - u - a
- D t = (v - u) × a

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8 **Solve 6x - 4 = 38**

A x = 7

B x = 8

C x = 6

D x = 10

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9 **Solve the simultaneous equations x + y = 10, x - y = 2**

A x = 4, y = 6

B x = 6, y = 4

C x = 6, y = 5

D x = 7, y = 4

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10 **Which inequality is shown by the integers x that satisfy x > 2 and x ≤ 6?**

- **A** $2 < x < 6$
- **B** $2 \leq x < 6$
- **C** $2 < x \leq 6$
- **D** $x > 2$

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11 **Solve $x^2 - 2x - 8 = 0$**

- **A** $x = 2$
- **B** $x = -4$ or $x = 2$
- **C** $x = -2$ or $x = 4$
- **D** $x = -4$ or $x = 3$

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12 **Solve 6(x + 6) = 90**

A x = 9

B x = 11

C x = 15

D x = 8

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13 **Solve 5x + 6 = x + 14**

A x = 1

B x = 2

C x = 4

D x = 3

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14 **A number multiplied by 4, plus 4, is 52. What is the number?**

- A 12
- B 13
- C 14
- D 11

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15 **Solve the inequality $4x + 3 < 31$**

- A $x < 7$
- B $x \leq 7$
- C $x < 8$
- D $x > 7$

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16 **The formula v = u + at gives v = 24 when u = 4, a = 4 and t = 5. Rearrange the formula to make t the subject.**

- **A** t = (v - u) × a
- **B** t = v + u/a
- **C** t = v - u/a
- **D** t = v - u - a

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17 **Solve 4x + 5 = 25**

- **A** x = 8
- **B** x = 6
- **C** x = 5
- **D** x = 4

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18 **Solve the simultaneous equations x + y = 4, x - y = -2**

A x = 1, y = 3

B x = 1, y = 4

C x = 2, y = 3

D x = 3, y = 1

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19 **Which inequality is shown by the integers x that satisfy x > 5 and x ≤ 9?**

A $5 \leq x < 9$

B $5 < x \leq 9$

C $x > 5$

D $5 < x < 9$

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20 **Solve $x^2 + 6x + 9 = 0$**

A x = -3 or x = -3

B x = 3 or x = 4

C x = 3 or x = 3

D x = 3

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21 **Solve $3(x + 4) = 36$**

A x = 10

B x = 7

C x = 8

D x = 12

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22 **Solve 6x + 1 = 5x + 7**

A x = 1

B x = 7

C x = 6

D x = 5

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23 **Solve the inequality 3x + 2 < 14**

A x < 4

B x ≤ 4

C x < 5

D x > 4

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24 **The formula v = u + at gives v = 28 when u = 3, a = 5 and t = 5. Rearrange the formula to make t the subject.**

- **A** t = v - u - a
- **B** t = v - u/a
- **C** t = (v - u) × a
- **D** t = v + u/a

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25 **Solve 4x + 4 = 24**

- **A** x = 5
- **B** x = 6
- **C** x = 4
- **D** x = 7

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ANSWER KEY

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

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