ENGLAND GCSE MATHS OCR HIGHER · UNIT 6 · 25 QUESTIONS

Algebra, Sequences — 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 **Rabbits breed in pairs, and the numbers of pairs are 1, 1, 2, 3, 5, 8. The next term of the sequence is**

- A 16
- B 11
- C 13
- D 10

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2 **A honeybee visits flowers: 3, 7, 11, 15. The next number is**

- A 19
- B 15
- C 23
- D 27

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3 **A thermometer records the temperature falling by 2 degrees each hour: 24, 22, 20, 18. The next temperature is**

- A 14
- B 20
- C 16
- D 18

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4 **Hardcover books are arranged in piles of 4, 8, 12, 16. The next pile has**

- A 20
- B 12
- C 16
- D 24

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5 **Nesting dolls decrease in height by 2 cm each time: 32, 30, 28, 26. The next height is**

- A 22
- B 24
- C 26
- D 28

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6 **A sunflower is 15 cm tall. It grows 6 cm each week. Its height after 8 weeks is**

- A 51
- B 69
- C 57
- D 63

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7 **The 25th term of the sequence with nth term 3n + 5 is**

- A 83
- B 77
- C 70
- D 80

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8 **The next two terms of the sequence 11, 17, 23, 29 are**

- A 41, 53
- B 41, 47
- C 35, 41
- D 29, 35

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9 **Eggs are packed in trays of 12, 24, 36, 48. The next tray holds**

- A 48
- B 72
- C 36
- D 60

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10 **Is 40 a term of the sequence with nth term 4n + 4?**

- A No, it is not a term
- B Yes, it is the 10th term
- C Yes, it is the 9th term
- D Yes, it is the 8th term

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11 **The nth term of the sequence 5, 14, 27, 44 is**

- A $2n^2 + 4n$
- B $2n^2 - 3n$
- C $3n^2 + 3n$
- D $2n^2 + 3n$

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12 **The nth term of the sequence 7, 10, 13, 16 is**

- A $3n + 4$
- B $3n - 4$
- C $4n + 3$
- D $4n + 4$

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13 **The next term of the sequence 1, 4, 9, 16, 25 is**

A 49

B 32

C 36

D 30

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14 **The next term of the sequence 5, 15, 45, 135 is**

A 410

B 607

C 140

D 405

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15 The 15th term of the sequence with nth term 5n + 3 is

- A 73
- B 72
- C 78
- D 83

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16 The next two terms of the sequence 7, 10, 13, 16 are

- A 19, 22
- B 16, 19
- C 22, 28
- D 22, 25

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17 **Is 41 a term of the sequence with nth term 4n + 1?**

- A No, it is not a term
- B Yes, it is the 10th term
- C Yes, it is the 11th term
- D Yes, it is the 9th term

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18 **The nth term of the sequence 1, 4, 9, 16 is**

- A $n^2 + 1$
- B $2n^2$
- C $n^2 + n$
- D n^2

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19 The nth term of the sequence 3, 5, 7, 9 is

- A n + 2
- B 2n + 1
- C 2n - 1
- D 3n + 1

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20 The next term of the sequence 1, 3, 6, 10, 15 is

- A 25
- B 18
- C 20
- D 21

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21 The next term of the sequence 3, 9, 27, 81 is

- A 364
- B 243
- C 84
- D 246

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22 The 20th term of the sequence with nth term 7n + 2 is

- A 149
- B 138
- C 135
- D 142

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23 **The next two terms of the sequence 8, 12, 16, 20 are**

- A 24, 28
- B 28, 36
- C 20, 24
- D 28, 32

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24 **Is 45 a term of the sequence with nth term 4n + 1?**

- A No, it is not a term
- B Yes, it is the 12th term
- C Yes, it is the 10th term
- D Yes, it is the 11th term

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25 **The nth term of the sequence 3, 10, 21, 36 is**

A $2n^2 + n$

B $3n^2 + n$

C $2n^2 + 2n$

D $2n^2 - n$

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ANSWER KEY

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

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