ENGLAND GCSE MATHS OCR HIGHER · UNIT 9 · 25 QUESTIONS

Geometry, Angles, Shapes, Constructions and Similarity — 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 kite has angles 90, 90, 120 and one more. The fourth angle is**

- A 120
- B 60
- C 240
- D 70

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2 **The sail of a sailing ship is a right-angled triangle with sides 9 m, 12 m and 15 m. A similar sail has a shortest side of 18 m. Its longest side is**

- A 30
- B 45
- C 24
- D 12

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3 **A castle is 8 m tall. Its model is 20 cm tall. The scale factor from the model to the real castle is**

- A 50
- B 30
- C 80
- D 40

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4 **A ladder leans against a wall, making an angle of 75 degrees with the ground. The angle between the ladder and the wall is**

- A 15
- B 75
- C 25
- D 105

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5 **A set square is a right-angled triangle with angles 90 degrees, 60 degrees and one more. The third angle is**

- A 30
- B 60
- C 40
- D 150

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6 **A Ferris wheel has 8 equally spaced gondolas. The angle between neighbouring gondolas is**

- A 8
- B 45
- C 40
- D 50

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7 **Two angles sit on a straight line. One angle is 92°. The other angle is**

- A 268°
- B 92°
- C 88°
- D 98°

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8 **The sum of the interior angles of a polygon with 8 sides is**

- A 900°
- B 1260°
- C 1080°
- D 1440°

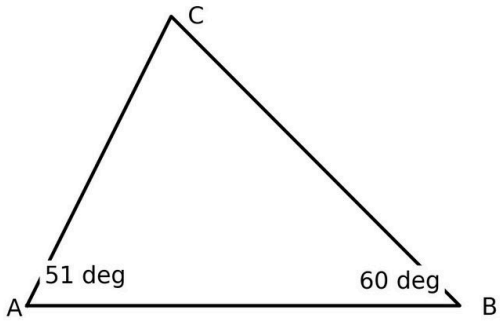
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9 **Two straight lines cross. One of the angles formed is 147°. The angle vertically opposite it is**

- A 33°
- B 147°
- C 90°
- D 213°

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10 **A triangle has two angles of 51° and 60°. The third angle is**



A 69°

B 129°

C 111°

D 84°

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Flag a mistake

11 **A shape with area 18 cm² is enlarged by scale factor 3. The area of the enlarged shape is**

- **A** 21 cm²
- **B** 162 cm²
- **C** 486 cm²
- **D** 54 cm²

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12 **The interior angle of a triangle is 46°. The exterior angle at the same vertex is**

- **A** 154°
- **B** 46°
- **C** 134°
- **D** 314°

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13 **Each exterior angle of a regular polygon with 10 sides is**

A 32°

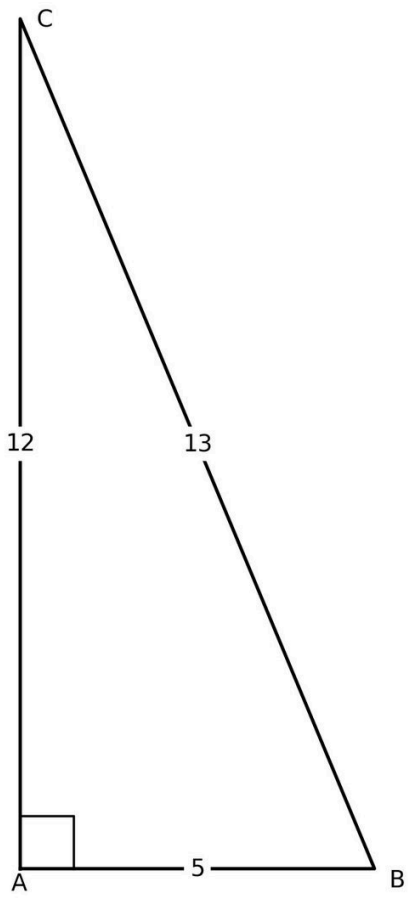
B 72°

C 36°

D 144°

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14 **The diagram shows a right-angled triangle with sides 5 cm, 12 cm and 13 cm. A similar triangle has a shortest side of 10 cm. Its longest side is**



A 26 cm

B 13 cm

C 15 cm

D 39 cm

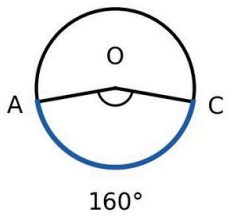
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15 **Two triangles are congruent if they match by**

- **A** side, angle, side
- **B** angle, angle, angle
- **C** side, side, side, side
- **D** side, side, angle

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16 **An angle at the centre of a circle stands on an arc of 160°. The angle at the circumference standing on the same arc is**



- **A** 320°
- **B** 160°
- **C** 90°
- **D** 80°

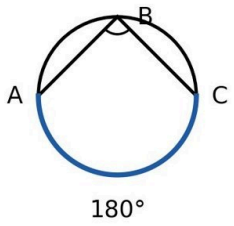
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17 **A point is translated by the vector binom-3-3. The point moves**

- **A** 3 right and 3 down
- **B** 3 left and 3 up
- **C** 3 up and 3 right
- **D** 3 left and 3 down

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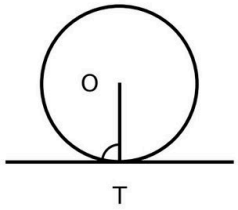
18 **An angle in a semicircle is always**



- **A** 180°
- **B** 45°
- **C** 60°
- **D** 90°

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19 **A radius drawn to a point where a tangent touches a circle makes an angle with the tangent of**



A 90°

B 45°

C 180°

D 60°

Understand It with Pulse | Flag a mistake

20 **Three angles meet at a point. Two of them are 122° and 146°. The third angle is**

- A 92°
- B 58°
- C 112°
- D 268°

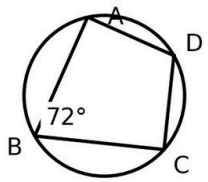
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21 **Two parallel lines are cut by a transversal. One angle is 77°. Its corresponding angle is**

- A 103°
- B 77°
- C 90°
- D 97°

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22 **In a quadrilateral in a circle, one angle is 72°. The opposite angle is**



- **A** 118°
- **B** 72°
- **C** 108°
- **D** 288°

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23 **Two angles sit on a straight line. One angle is 143°. The other angle is**

- **A** 47°
- **B** 217°
- **C** 143°
- **D** 37°

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24 **Two straight lines cross. One of the angles formed is 104°. The angle vertically opposite it is**

A 76°

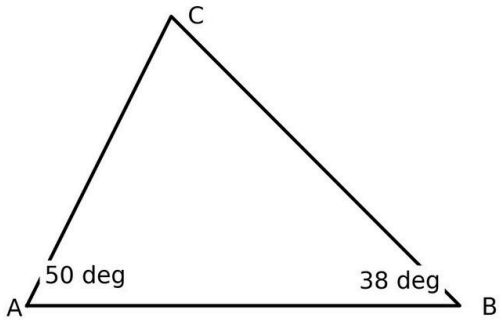
B 104°

C 90°

D 256°

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25 **A triangle has two angles of 50° and 38°. The third angle is**



A 130°

B 88°

C 92°

D 107°

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ANSWER KEY

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

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