ENGLAND GCSE MATHS EDEXCEL FOUNDATION · 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 set square is a right-angled triangle with angles 90 degrees, 60 degrees and one more. The third angle is**

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

Understand It with Pulse | Flag a mistake

2 **A Ferris wheel has 10 equally spaced gondolas. The angle between neighbouring gondolas is**

- A 41
- B 36
- C 31
- D 10

Understand It with Pulse | Flag a mistake

3 **The sail of a sailing ship is a right-angled triangle with sides 8 m, 15 m and 17 m. A similar sail has a shortest side of 16 m. Its longest side is**

- A 34
- B 18
- C 51
- D 30

Understand It with Pulse | Flag a mistake

4 **A kite has angles 90, 90, 120 and one more. The fourth angle is**

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

Understand It with Pulse | Flag a mistake

5 **A ladder leans against a wall, making an angle of 65 degrees with the ground. The angle between the ladder and the wall is**

- A 35
- B 25
- C 115
- D 65

Understand It with Pulse | Flag a mistake

6 **A castle is 12 m tall. Its model is 30 cm tall. The scale factor from the model to the real castle is**

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

Understand It with Pulse | Flag a mistake

7 **Three angles meet at a point. Two of them are 67° and 67°. The third angle is**

- A 113°
- B 134°
- C 246°
- D 226°

Understand It with Pulse | Flag a mistake

8 **Two straight lines cross. One of the angles formed is 126°. The angle vertically opposite it is**

A 90°

B 234°

C 54°

D 126°

Understand It with Pulse | Flag a mistake

9 **The interior angle of a triangle is 82°. The exterior angle at the same vertex is**

A 278°

B 82°

C 118°

D 98°

Understand It with Pulse | Flag a mistake

10 **The sum of the interior angles of a polygon with 7 sides is**

A 900°

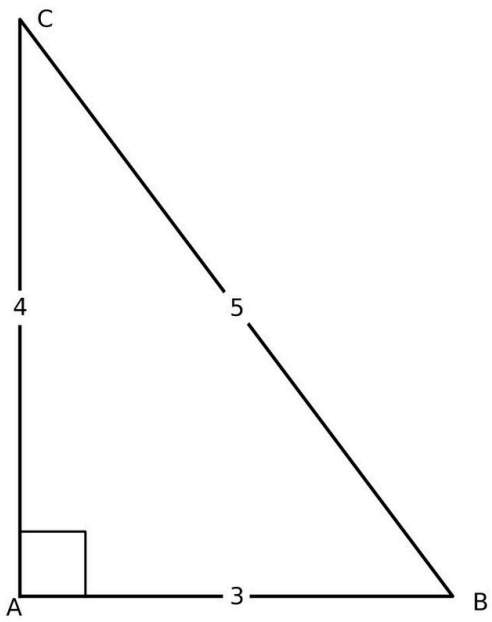
B 1080°

C 1260°

D 720°

Understand It with Pulse | Flag a mistake

11 **The diagram shows a right-angled triangle with sides 3 cm, 4 cm and 5 cm. A similar triangle has a shortest side of 9 cm. Its longest side is**



A 20 cm

B 8 cm

C 15 cm

D 5 cm

Understand It with Pulse | Flag a mistake

12 **Two angles sit on a straight line. One angle is 99°. The other angle is**

- A 81°
- B 261°
- C 91°
- D 99°

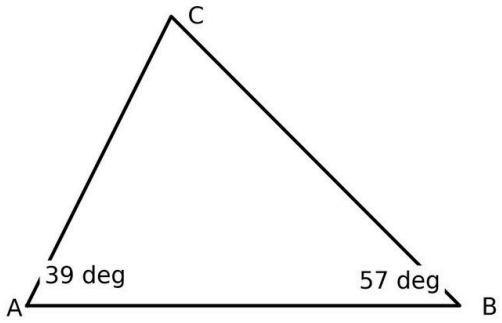
Understand It with Pulse | Flag a mistake

13 **Two parallel lines are cut by a transversal. One angle is 69°. Its alternate angle is**

- A 109°
- B 291°
- C 69°
- D 111°

Understand It with Pulse | Flag a mistake

14 **A triangle has two angles of 39° and 57°. The third angle is**



- **A** 84°
- **B** 96°
- **C** 141°
- **D** 99°

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

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

- A 36°
- B 144°
- C 32°
- D 72°

Understand It with Pulse | Flag a mistake

17 **A shape with area 12 cm² is enlarged by scale factor 3. The area of the enlarged shape is**

- A 324 cm²
- B 36 cm²
- C 15 cm²
- D 108 cm²

Understand It with Pulse | Flag a mistake

18 **Three angles meet at a point. Two of them are 116° and 119°. The third angle is**

- A 145°
- B 64°
- C 235°
- D 125°

Understand It with Pulse | Flag a mistake

19 **Two straight lines cross. One of the angles formed is 59°. The angle vertically opposite it is**

A 90°

B 301°

C 121°

D 59°

Understand It with Pulse | Flag a mistake

20 **The interior angle of a triangle is 110°. The exterior angle at the same vertex is**

A 250°

B 110°

C 90°

D 70°

Understand It with Pulse | Flag a mistake

21 **The sum of the interior angles of a polygon with 5 sides is**

A 900°

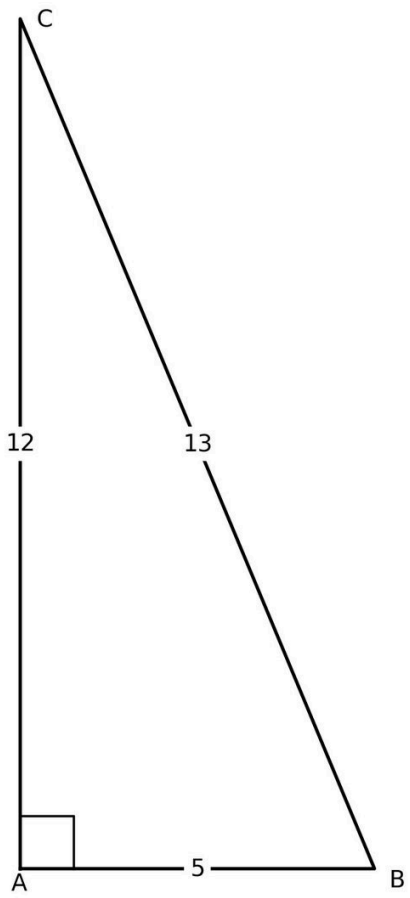
B 720°

C 360°

D 540°

Understand It with Pulse | Flag a mistake

22 **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 39 cm

D 15 cm

Understand It with Pulse | Flag a mistake

23 **Two angles sit on a straight line. One angle is 118°. The other angle is**

- A 72°
- B 62°
- C 118°
- D 242°

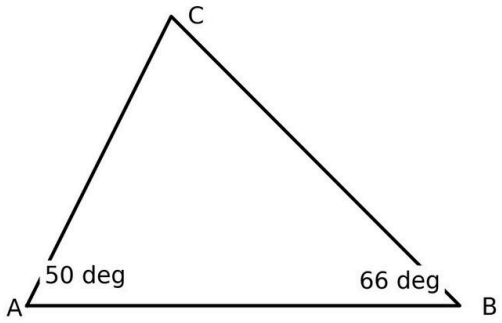
Understand It with Pulse | Flag a mistake

24 **Two parallel lines are cut by a transversal. One angle is 112°. Its corresponding angle is**

- A 68°
- B 132°
- C 112°
- D 90°

Understand It with Pulse | Flag a mistake

25 **A triangle has two angles of 50° and 66°. The third angle is**



A 116°

B 130°

C 79°

D 64°

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.