ENGLAND GCSE MATHS AQA 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 **The sail of a sailing ship is a right-angled triangle with sides 5 m, 12 m and 13 m. A similar sail has a shortest side of 15 m. Its longest side is**

- **A** 39
- **B** 36
- **C** 24
- **D** 52

Understand It with Pulse | Flag a mistake

2 **A kite has angles 90, 90, 100 and one more. The fourth angle is**

- A 260
- B 100
- C 90
- D 80

Understand It with Pulse | Flag a mistake

3 **A castle is 20 m tall. Its model is 40 cm tall. The scale factor from the model to the real castle is**

- A 60
- B 40
- C 50
- D 100

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

5 **A ladder leans against a wall, making an angle of 80 degrees with the ground. The angle between the ladder and the wall is**

- A 100
- B 80
- C 20
- D 10

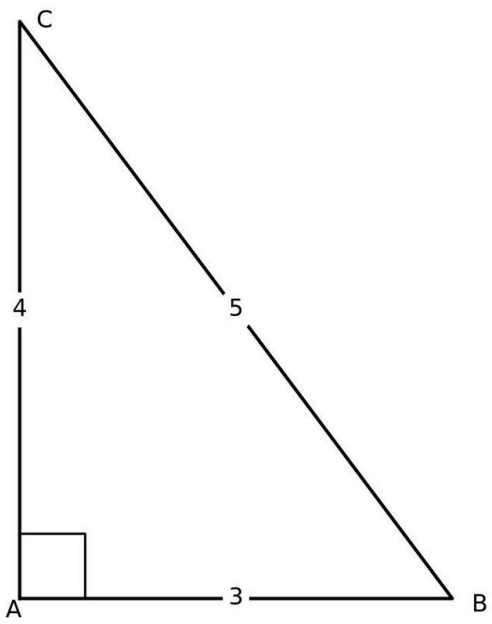
Understand It with Pulse | Flag a mistake

6 **A set square is a right-angled triangle with angles 90 degrees, 30 degrees and one more. The third angle is**

- A 30
- B 60
- C 120
- D 70

Understand It with Pulse | Flag a mistake

7 **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 8 cm

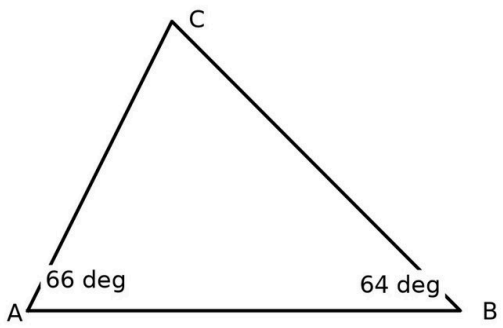
B 5 cm

C 15 cm

D 20 cm

Understand It with Pulse | Flag a mistake

8 **A triangle has two angles of 66° and 64°. The third angle is**



- **A** 65°
- **B** 130°
- **C** 50°
- **D** 114°

Understand It with Pulse | Flag a mistake

9 **Two angles sit on a straight line. One angle is 78°. The other angle is**

- A 282°
- B 102°
- C 112°
- D 78°

Understand It with Pulse | Flag a mistake

10 **A shape with area 12 cm² is enlarged by scale factor 2. The area of the enlarged shape is**

- A 48 cm²
- B 96 cm²
- C 14 cm²
- D 24 cm²

Understand It with Pulse | Flag a mistake

11 **A point is translated by the vector binom53. The point moves**

- A 3 up and 5 right
- B 5 right and 3 down
- C 5 left and 3 up
- D 5 right and 3 up

Understand It with Pulse | Flag a mistake

12 **Two straight lines cross. One of the angles formed is 102°. The angle vertically opposite it is**

- A 258°
- B 78°
- C 102°
- D 90°

Understand It with Pulse | Flag a mistake

13 **The interior angle of a triangle is 111°. The exterior angle at the same vertex is**

- A 111°
- B 69°
- C 249°
- D 89°

Understand It with Pulse | Flag a mistake

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

- A 900°
- B 720°
- C 1080°
- D 1260°

Understand It with Pulse | Flag a mistake

15 **Each exterior angle of a regular polygon with 8 sides is**

A 135°

B 45°

C 90°

D 40°

Understand It with Pulse | Flag a mistake

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

A side, angle, side

B angle, angle, angle

C side, side, angle

D side, side, side, side

Understand It with Pulse | Flag a mistake

17 **Three angles meet at a point. Two of them are 45° and 53°. The third angle is**

- A 98°
- B 262°
- C 282°
- D 135°

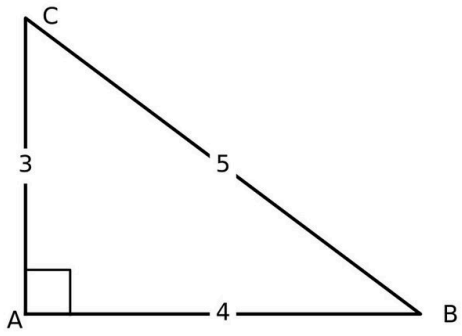
Understand It with Pulse | Flag a mistake

18 **Two parallel lines are cut by a transversal. One angle is 128°. Its corresponding angle is**

- A 148°
- B 128°
- C 52°
- D 90°

Understand It with Pulse | Flag a mistake

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



A 15 cm

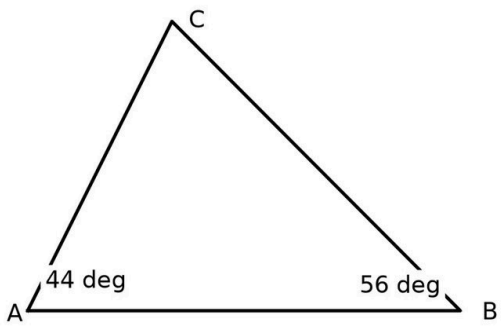
B 20 cm

C 5 cm

D 8 cm

Understand It with Pulse | Flag a mistake

20 **A triangle has two angles of 44° and 56°. The third angle is**



A 95°

B 136°

C 80°

D 100°

Understand It with Pulse | Flag a mistake

21 **Two angles sit on a straight line. One angle is 88°. The other angle is**

- A 272°
- B 88°
- C 102°
- D 92°

Understand It with Pulse | Flag a mistake

22 **A shape with area 5 cm² is enlarged by scale factor 3. The area of the enlarged shape is**

- A 45 cm²
- B 15 cm²
- C 135 cm²
- D 8 cm²

Understand It with Pulse | Flag a mistake

23 **A point is translated by the vector binom-4-2. The point moves**

- A 2 up and 4 right
- B 4 left and 2 up
- C 4 right and 2 down
- D 4 left and 2 down

Understand It with Pulse | Flag a mistake

24 **Two straight lines cross. One of the angles formed is 96°. The angle vertically opposite it is**

- A 264°
- B 90°
- C 96°
- D 84°

Understand It with Pulse | Flag a mistake

25 **The interior angle of a triangle is 43°. The exterior angle at the same vertex is**

A 137°

B 157°

C 43°

D 317°

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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