ENGLAND GCSE MATHS EDEXCEL HIGHER · UNIT 11 · 25 QUESTIONS

Geometry, Pythagoras, Trigonometry and Vectors — 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 ladder 5 m long leans against a wall. Its foot is 3 m from the wall. How high up the wall does it reach?**

- A 7
- B 6
- C 4
- D 3

Understand It with Pulse | Flag a mistake

2 **A kite string is 8 m long and makes an angle of 30° with the ground. The height of the kite is**

A 4

B 3

C 8

D 5

Understand It with Pulse | Flag a mistake

3 **A passenger aeroplane takes off at an angle of 30° and flies 300 m. Its height is**

A 150

B 160

C 300

D 140

Understand It with Pulse | Flag a mistake

4 **A brown dog walks 3 m east and then 4 m north. How far is it from its starting point?**

- A 7
- B 6
- C 5
- D 4

Understand It with Pulse | Flag a mistake

5 **A rocket climbs at an angle of 30° to the ground and travels 300 m. Its height is**

- A 150
- B 300
- C 160
- D 140

Understand It with Pulse | Flag a mistake

6 **A sailing ship sails 9 km east and then 12 km north. How far is it from its starting point?**

- A 16
- B 15
- C 21
- D 14

Understand It with Pulse | Flag a mistake

7 **ABCD is a parallelogram. Vector AB is a and vector AD is b. Vector AC is**

- A b - a
- B a - b
- C 2a
- D a + b

Understand It with Pulse | Flag a mistake

8 **A cuboid is 12 cm by 16 cm by 21 cm. The longest diagonal is**

- A 30 cm
- B 28 cm
- C 49 cm
- D 29 cm

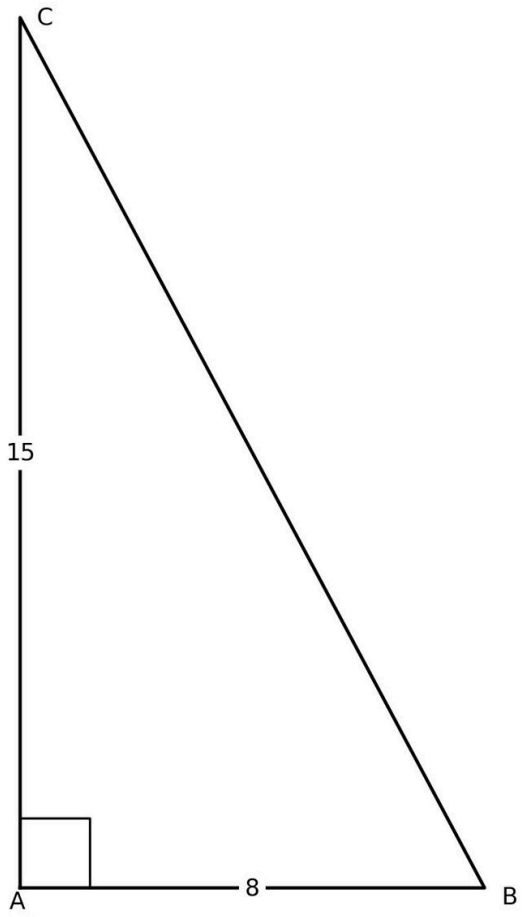
Understand It with Pulse | Flag a mistake

9 **The exact value of tan 45° is**

- A $\sqrt{2}/2$
- B 1
- C $\frac{1}{2}$
- D $\sqrt{3}$

Understand It with Pulse | Flag a mistake

10 **A right-angled triangle has one side of length 8 cm and the other side of length 15 cm. The hypotenuse is**



A 16 cm

B 18 cm

C 17 cm

D 23 cm

Understand It with Pulse | Flag a mistake

11 **The vector (3, 4) has magnitude**

- A 7
- B 6
- C 5
- D 4

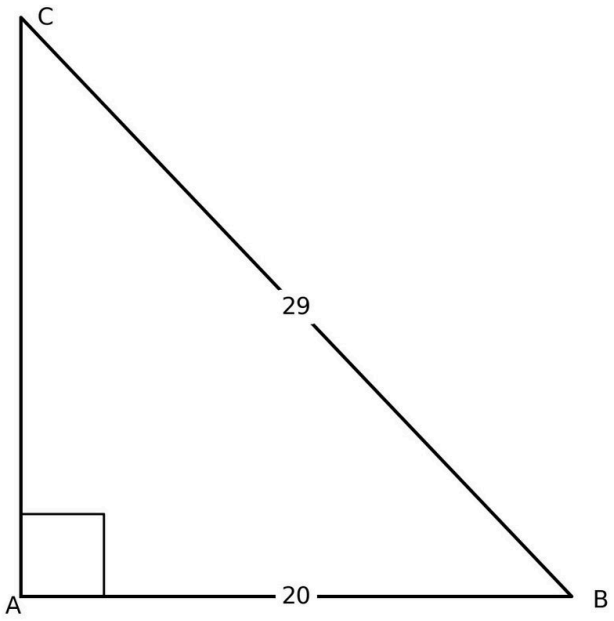
Understand It with Pulse | Flag a mistake

12 **In a right-angled triangle, the hypotenuse is 10 cm and one angle is 60°. The side next to the 60° angle is**

- A 6 cm
- B 4 cm
- C 10 cm
- D 5 cm

Understand It with Pulse | Flag a mistake

13 **A right-angled triangle has a hypotenuse of 29 cm and one side of length 20 cm. The other side is**



- **A** 9 cm
- **B** 22 cm
- **C** 21 cm
- **D** 20 cm

Understand It with Pulse | **Flag a mistake**

14 **In a triangle, side a = 12 cm is opposite an angle of 30° and side b is opposite an angle of 60°. The length of side b is**

- **A** $6\sqrt{3}$
- **B** $12\sqrt{3}$
- **C** $24\sqrt{3}$
- **D** 12

Understand It with Pulse | Flag a mistake

15 **In a right-angled triangle, one angle is 45° and the side next to it is 5 cm. The side opposite the 45° angle is**

- **A** 10 cm
- **B** 4 cm
- **C** 5 cm
- **D** 6 cm

Understand It with Pulse | Flag a mistake

16 **A triangle has sides 4 cm and 12 cm with an included angle of 30°. Its area is**

A 12 cm²

B 48 cm²

C 24 cm²

D 17 cm²

Understand It with Pulse | Flag a mistake

17 **In a right-angled triangle, the hypotenuse is 16 cm and one angle is 30°. The side opposite the 30° angle is**

A 7 cm

B 16 cm

C 9 cm

D 8 cm

Understand It with Pulse | Flag a mistake

18 **Two sides of a triangle are 6 cm and 8 cm, with an included angle of 60°. The third side is, to one decimal place, about**

A 10 cm

B 14 cm

C 8.2 cm

D 7.2 cm

Understand It with Pulse | Flag a mistake

19 **The vector a = (1, 3) and the vector b = (3, 3). The vector a + b is**

A (-2, 0)

B (4, 6)

C (4, 0)

D (5, 6)

Understand It with Pulse | Flag a mistake

20 **A cuboid is 6 cm by 8 cm by 24 cm. The longest diagonal is**

A 27 cm

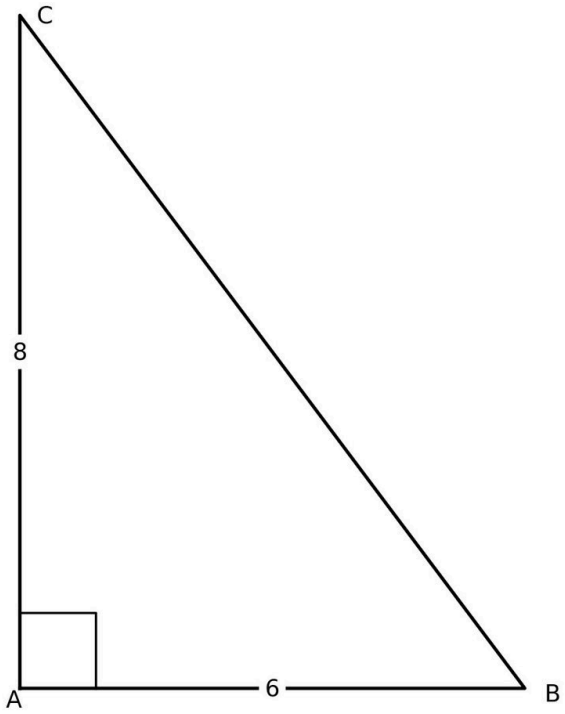
B 26 cm

C 38 cm

D 25 cm

Understand It with Pulse | Flag a mistake

21 **A right-angled triangle has one side of length 6 cm and the other side of length 8 cm. The hypotenuse is**



A 11 cm

B 14 cm

C 10 cm

D 9 cm

Understand It with Pulse | Flag a mistake

22 **The vector (9, 12) has magnitude**

- A 21
- B 16
- C 14
- D 15

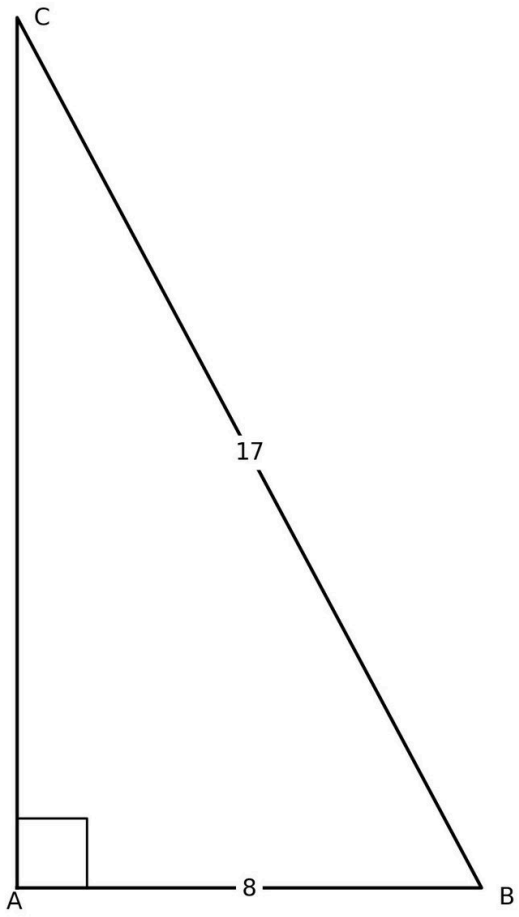
Understand It with Pulse | Flag a mistake

23 **In a right-angled triangle, the hypotenuse is 14 cm and one angle is 60°. The side next to the 60° angle is**

- A 8 cm
- B 7 cm
- C 14 cm
- D 6 cm

Understand It with Pulse | Flag a mistake

24 **A right-angled triangle has a hypotenuse of 17 cm and one side of length 8 cm. The other side is**



A 16 cm

B 9 cm

C 14 cm

D 15 cm

Understand It with Pulse | Flag a mistake

25 **In a right-angled triangle, one angle is 45° and the side next to it is 9 cm. The side opposite the 45° angle is**

A 10 cm

B 18 cm

C 9 cm

D 8 cm

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

© 2026 Brett Robbins. All Rights Reserved.