ENGLAND GCSE MATHS OCR FOUNDATION · 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 kite string is 16 m long and makes an angle of 30° with the ground. The height of the kite is**

- **A** 8
- **B** 16
- **C** 9
- **D** 7

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

3 **A rocket climbs at an angle of 30° to the ground and travels 600 m. Its height is**

- A 290
- B 600
- C 310
- D 300

Understand It with Pulse | Flag a mistake

4 **A sailing ship sails 3 km east and then 4 km north. How far is it from its starting point?**

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

Understand It with Pulse | Flag a mistake

5 **A ladder 13 m long leans against a wall. Its foot is 5 m from the wall. How high up the wall does it reach?**

- A 15
- B 5
- C 14
- D 12

Understand It with Pulse | Flag a mistake

6 **A passenger aeroplane takes off at an angle of 30° and flies 200 m. Its height is**

A 100

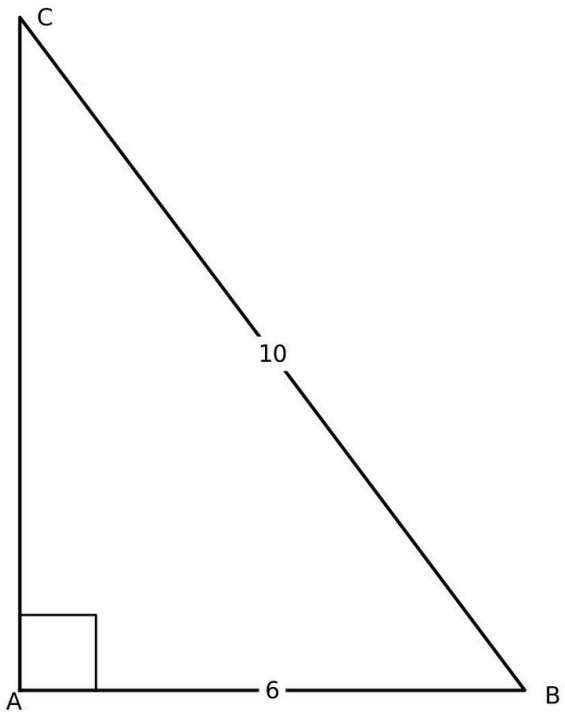
B 110

C 200

D 90

Understand It with Pulse | Flag a mistake

7 **A right-angled triangle has a hypotenuse of 10 cm and one side of length 6 cm. The other side is**



A 4 cm

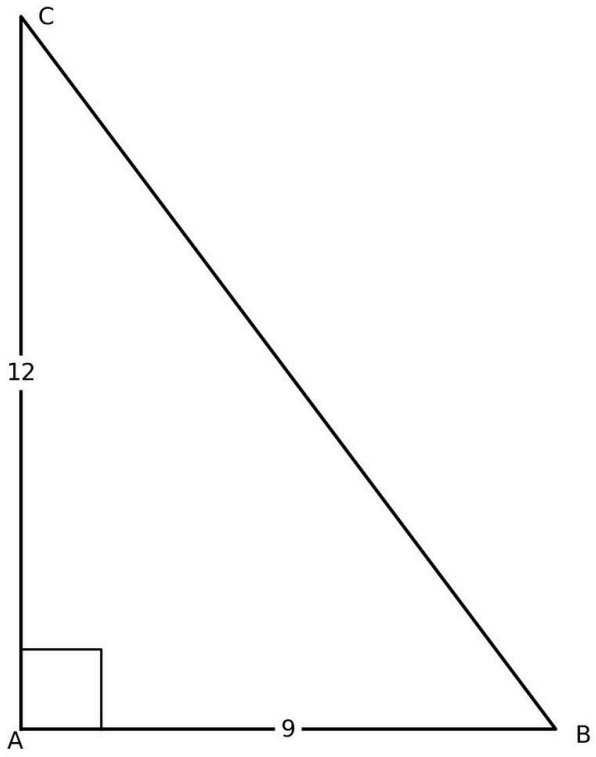
B 7 cm

C 9 cm

D 8 cm

Understand It with Pulse | Flag a mistake

8 **A right-angled triangle has one side of length 9 cm and the other side of length 12 cm. The hypotenuse is**



A 15 cm

B 14 cm

C 16 cm

D 21 cm

Understand It with Pulse | Flag a mistake

9 **The vector (5, 12) has magnitude**

- A 13
- B 14
- C 12
- D 17

Understand It with Pulse | Flag a mistake

10 **In a right-angled triangle, one angle is 45° and the side next to it is 8 cm. The side opposite the 45° angle is**

- A 8 cm
- B 16 cm
- C 7 cm
- D 9 cm

Understand It with Pulse | Flag a mistake

11 **The vector a = (3, 5) and the vector b = (4, 2). The vector a + b is**

- A (8, 7)
- B (-1, 3)
- C (7, 3)
- D (7, 7)

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

13 **In a right-angled triangle, the hypotenuse is 6 cm and one angle is 30°. The side opposite the 30° angle is**

A 4 cm

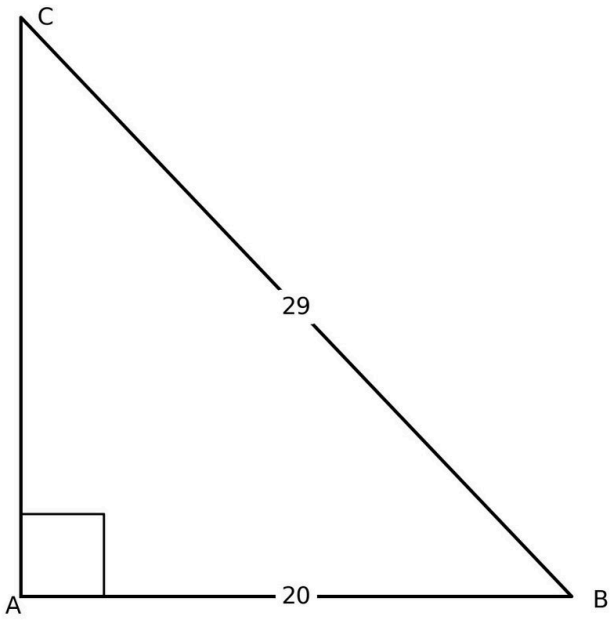
B 2 cm

C 3 cm

D 6 cm

Understand It with Pulse | Flag a mistake

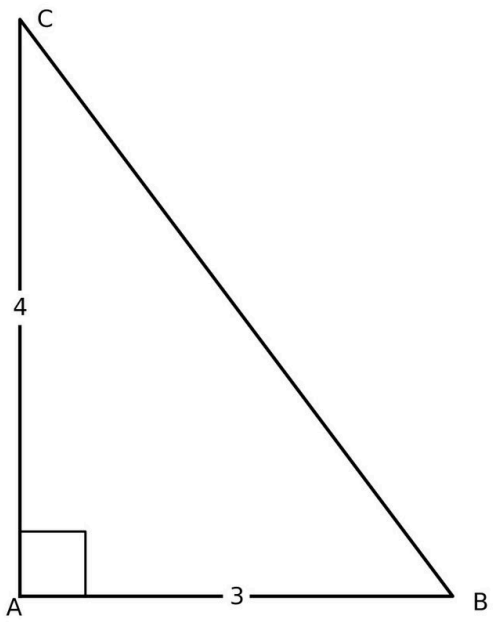
14 **A right-angled triangle has a hypotenuse of 29 cm and one side of length 20 cm. The other side is**



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

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

15 **A right-angled triangle has one side of length 3 cm and the other side of length 4 cm. The hypotenuse is**



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

Understand It with Pulse | Flag a mistake

16 **The vector (6, 8) has magnitude**

A 9

B 14

C 10

D 11

Understand It with Pulse | Flag a mistake

17 **The vector a = (1, 2) and the vector b = (1, 5). The vector a + b is**

A (2, -3)

B (0, -3)

C (3, 7)

D (2, 7)

Understand It with Pulse | Flag a mistake

18 **In a right-angled triangle, the hypotenuse is 20 cm and one angle is 60°. The side next to the 60° angle is**

A 20 cm

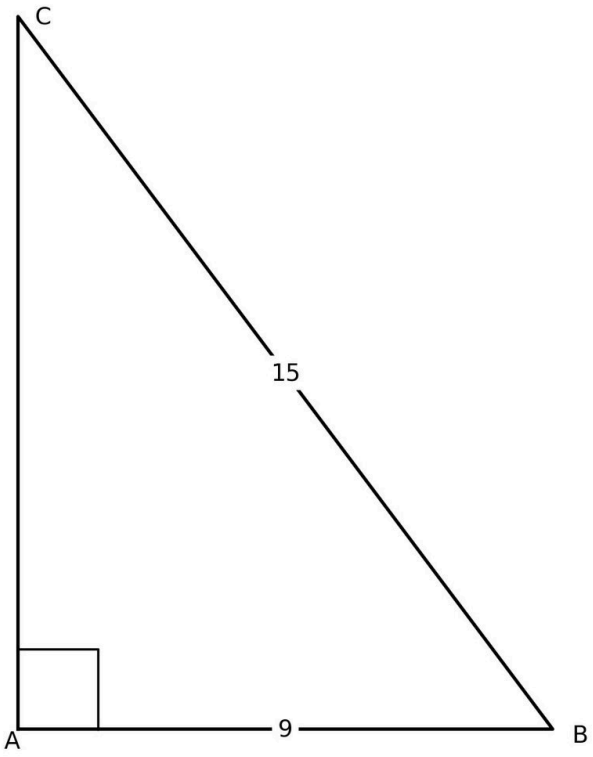
B 9 cm

C 11 cm

D 10 cm

Understand It with Pulse | Flag a mistake

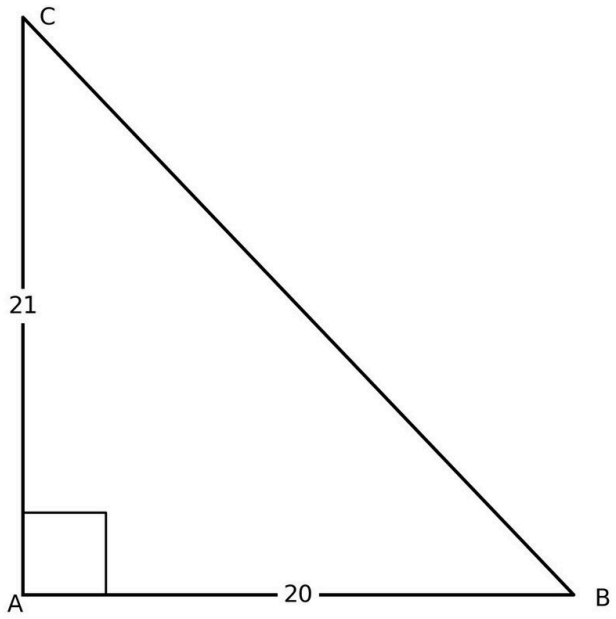
19 **A right-angled triangle has a hypotenuse of 15 cm and one side of length 9 cm. The other side is**



- **A** 11 cm
- **B** 12 cm
- **C** 13 cm
- **D** 6 cm

Understand It with Pulse | Flag a mistake

20 **A right-angled triangle has one side of length 20 cm and the other side of length 21 cm. The hypotenuse is**



- **A** 28 cm
- **B** 41 cm
- **C** 29 cm
- **D** 30 cm

Understand It with Pulse | Flag a mistake

21 **The vector a = (5, 2) and the vector b = (5, 5). The vector a + b is**

- A (0, -3)
- B (11, 7)
- C (10, -3)
- D (10, 7)

Understand It with Pulse | Flag a mistake

22 **In a right-angled triangle, the hypotenuse is 6 cm and one angle is 60°. The side next to the 60° angle is**

- A 4 cm
- B 6 cm
- C 2 cm
- D 3 cm

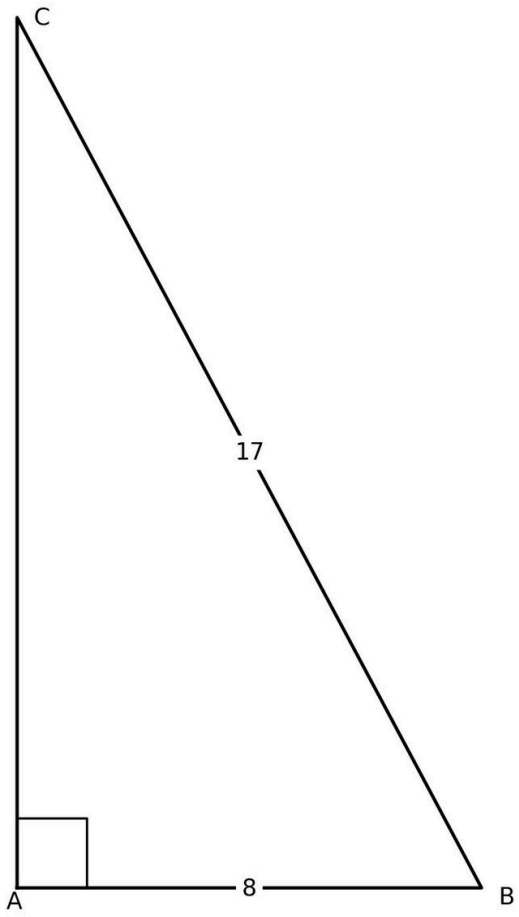
Understand It with Pulse | Flag a mistake

23 **In a right-angled triangle, the hypotenuse is 12 cm and one angle is 30°. The side opposite the 30° angle is**

- **A** 6 cm
- **B** 7 cm
- **C** 5 cm
- **D** 12 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

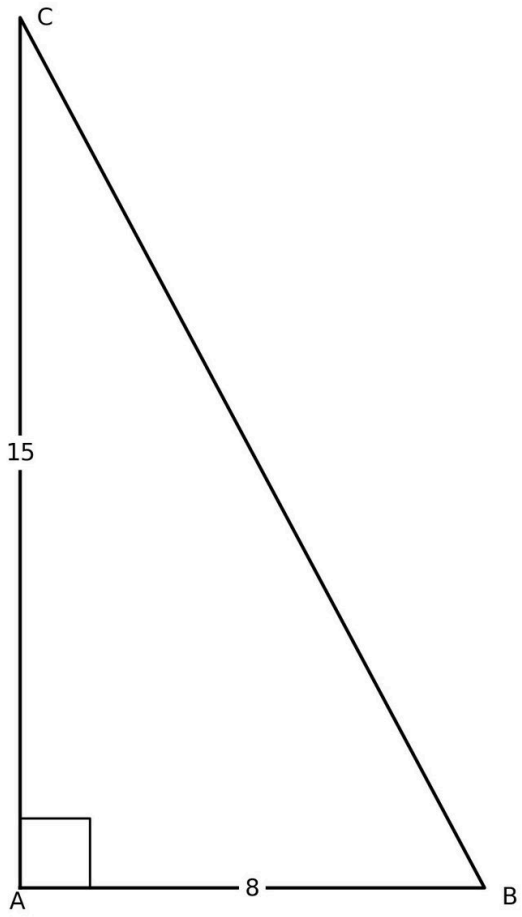
B 9 cm

C 15 cm

D 14 cm

Understand It with Pulse | Flag a mistake

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



A 17 cm

B 23 cm

C 16 cm

D 18 cm

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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