

Pythagoras & the Converse

Topic focus paper · Calculator allowed

Name: _____

Date: _____

Total: **25 marks**

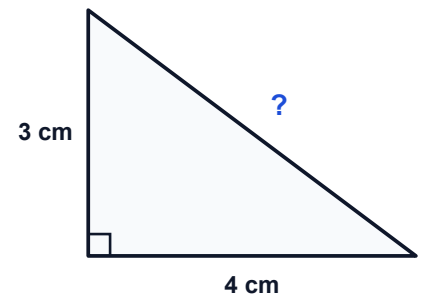
Instructions

- Answer all questions in the spaces provided.
- Show all working. Marks may be awarded for method.
- Diagrams are not drawn to scale.
- Calculators may be used unless a question says otherwise.

1 Pythagoras

2 marks

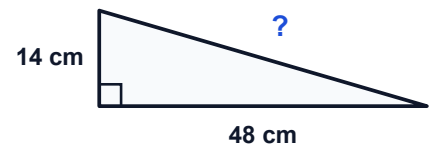
A right-angled triangle has shorter sides of length 3 cm and 4 cm. Work out the length of the hypotenuse.



2 Pythagoras

2 marks

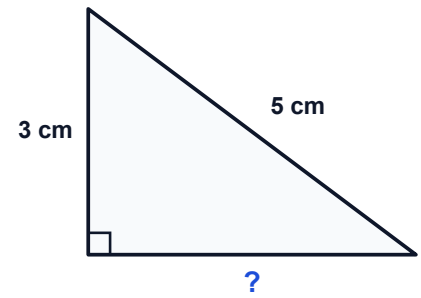
A right-angled triangle has shorter sides of length 14 cm and 48 cm. Work out the length of the hypotenuse.



3 Pythagoras

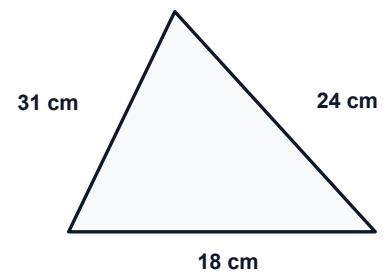
2 marks

A right-angled triangle has a hypotenuse of length 5 cm and one shorter side of length 3 cm. Work out the length of the other shorter side.

**4** Pythagoras (converse)

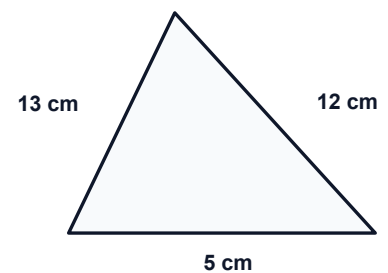
3 marks

A triangle has sides of length 18 cm, 24 cm and 31 cm. Is the triangle right-angled? You must show your working.

**5** Pythagoras (converse)

3 marks

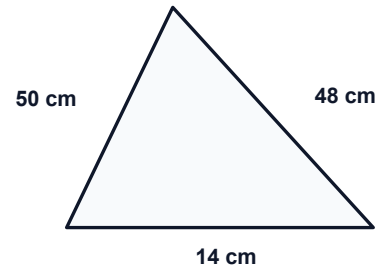
A triangle has sides of length 5 cm, 12 cm and 13 cm. Is the triangle right-angled? You must show your working.



6 Pythagoras (converse)

3 marks

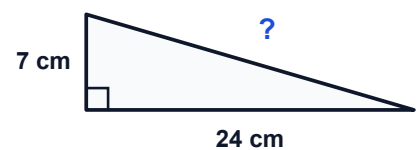
A triangle has sides of length 14 cm, 48 cm and 50 cm. Is the triangle right-angled? You must show your working.



7 Pythagoras

2 marks

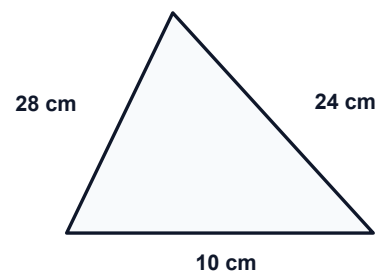
A right-angled triangle has shorter sides of length 7 cm and 24 cm. Work out the length of the hypotenuse.



8 Pythagoras (converse)

3 marks

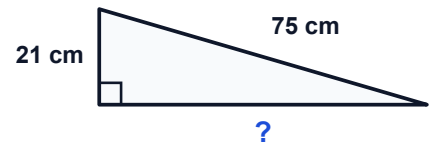
A triangle has sides of length 10 cm, 24 cm and 28 cm. Is the triangle right-angled? You must show your working.



9 Pythagoras

2 marks

A right-angled triangle has a hypotenuse of length 75 cm and one shorter side of length 21 cm. Work out the length of the other shorter side.



10 Pythagoras (converse)

3 marks

A triangle has sides of length 5 cm, 12 cm and 14 cm. Is the triangle right-angled? You must show your working.

