

Pythagoras

For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **24**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method. You may use a calculator.

- 1** ABC is a right-angled triangle.
 $AB = 5.2$ cm and $BC = 7.1$ cm.
Angle $ABC = 90^\circ$

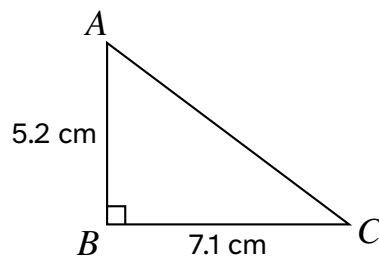


Diagram **NOT** accurately drawn

Work out the length of AC .
Give your answer correct to 1 decimal place.

..... cm
(2)

(Total for Question 1 is 2 marks)

2 Here is a right-angled triangle.

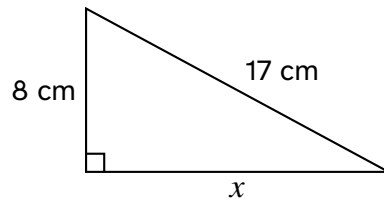


Diagram **NOT** accurately drawn

Work out the length x .

..... cm
(3)

(Total for Question 2 is 3 marks)

- 3 The diagram shows an isosceles triangle.

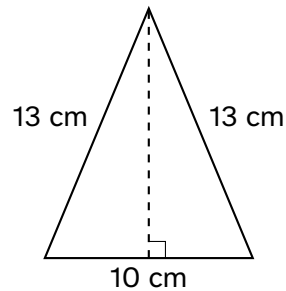


Diagram **NOT** accurately drawn

Work out the area of the triangle.

..... cm^2
(4)

(Total for Question 3 is 4 marks)

- 4 A football pitch is a rectangle 100 m long and 64 m wide.
Ellie wants to get from one corner of the pitch to the opposite corner.
She can walk along two sides of the pitch or walk straight across the diagonal.
How much shorter is the walk across the diagonal?
Give your answer correct to 1 decimal place.

..... m
(3)

(Total for Question 4 is 3 marks)

- 5 A triangle has sides of length 7 cm, 24 cm and 25 cm.
Show that the triangle is right-angled.

(2)

(Total for Question 5 is 2 marks)

- 6 A square has sides of length 6 cm.
Work out the length of a diagonal of the square.
Give your answer correct to 1 decimal place.

..... cm

(2)

(Total for Question 6 is 2 marks)

- 7 Sam makes a wooden frame with four straight sides. Opposite sides are equal in length.
The perimeter of the frame is 280 cm and one side is 80 cm long.
One diagonal of the frame is 99 cm long.
Sam says,
 'The corners of my frame are right angles.'

Is Sam correct?
You must show how you get your answer.

(4)

(Total for Question 7 is 4 marks)

- 8 ABC and ACD are right-angled triangles.
 $AB = 6\text{ cm}$, $BC = 8\text{ cm}$, $AD = 4\text{ cm}$

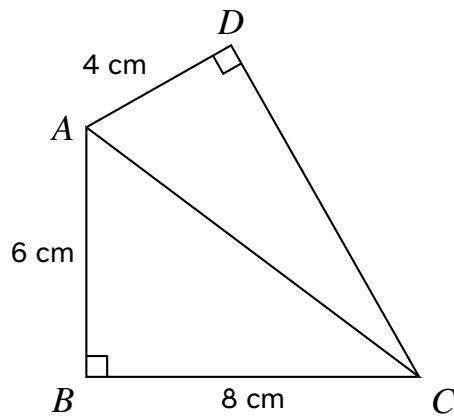


Diagram **NOT** accurately drawn

Work out the length of CD .
 Give your answer correct to 1 decimal place.

..... cm
 (4)

(Total for Question 8 is 4 marks)