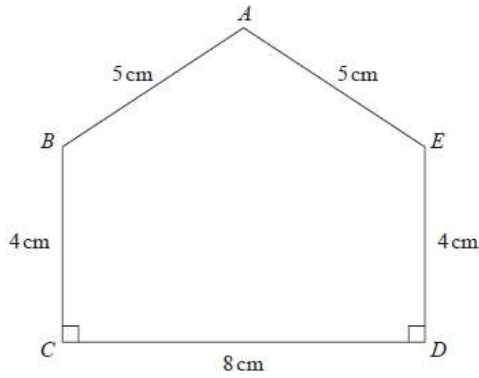


GCSE QUESTIONS

Q1. NON-CALCULATOR



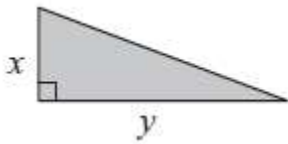
ABCDE is a pentagon. Work out the area of *ABCDE*.

..... cm²

(Total for question = 5 marks)

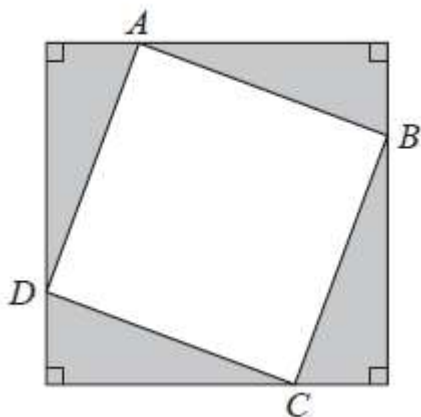
Q2. NON-CALCULATOR

Here is a right-angled triangle.



Four of these triangles are joined to enclose the square *ABCD* as shown below.

Show that the area of the square *ABCD* is $x^2 + y^2$



(Total for question = 3 marks)

Q3. NON-CALCULATOR

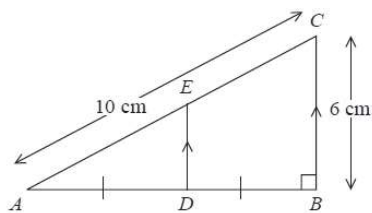


Diagram NOT accurately drawn

ADB and AEC are straight lines.

DE is parallel to BC .

Angle $ABC = 90^\circ$

$AC = 10$ cm.

$BC = 6$ cm.

D is the midpoint of AB .

Work out the area of trapezium $BCED$.

..... cm²

(Total for question = 4 marks)

Q4. CALCULATOR

XYZ is a right-angled triangle.

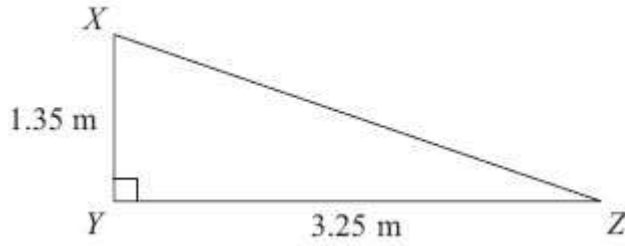


Diagram **NOT** accurately drawn

Calculate the length of XZ.

Give your answer correct to 3 significant figures.

.....
(Total for Question is 3 marks)

Q5. CALCULATOR

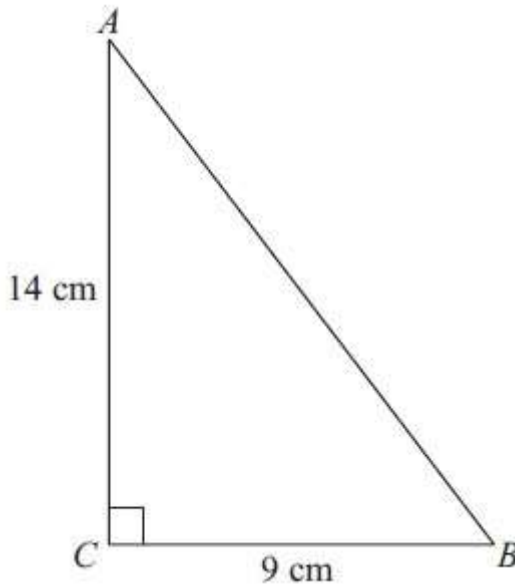


Diagram **NOT** accurately drawn

Calculate the length of AB.

Give your answer correct to 1 decimal place.

.....
(Total for Question is 3 marks)

Q6. CALCULATOR

ABC is a right-angled triangle.

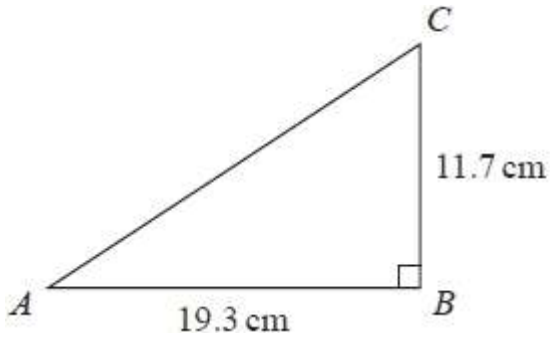


Diagram NOT accurately drawn

Calculate the length of AC.
Give your answer correct to 3 significant figures.

..... cm

(Total for question = 3 marks)

Q7. CALCULATOR

The diagram shows the marking on a school playing field.

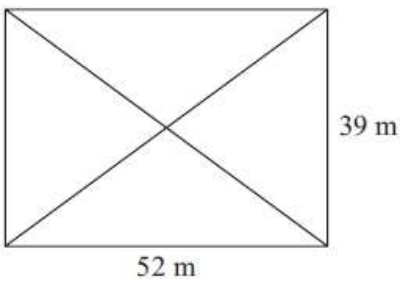


Diagram NOT accurately drawn

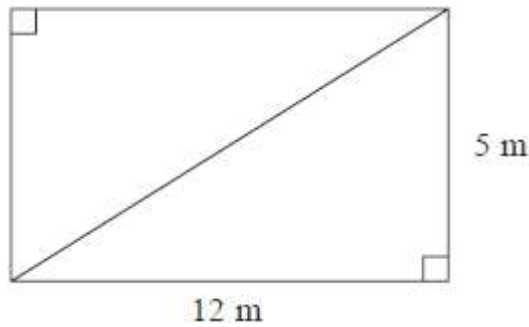
The diagram shows a rectangle and its diagonals.
Work out the total length of the four sides of the rectangle and its diagonals.

..... m

(Total for Question is 5 marks)

Q8. CALCULATOR

This rectangular frame is made from 5 straight pieces of metal.



The weight of the metal is 1.5 kg per metre.

Work out the total weight of the metal in the frame.

..... kg
(Total for question = 5 marks)

Q9. CALCULATOR

The diagram shows a rectangular framework.

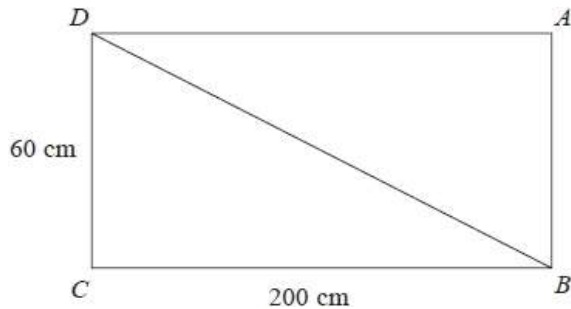


Diagram NOT accurately drawn

The framework is made from 5 metal rods.

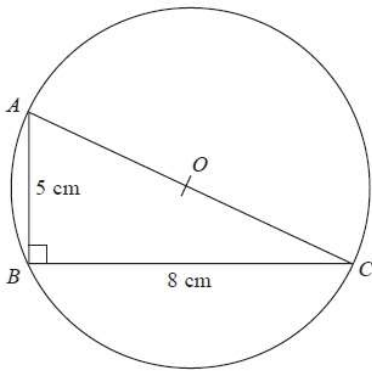
The metal rods have a weight of 0.9 kg per metre.

Work out the total weight of the framework.

Give your answer, in kg, correct to 3 significant figures.

..... kg
(Total for question = 4 marks)

Q10. CALCULATOR



ABC is a right-angled triangle.
 A , B and C are points on the circumference of a circle centre O .
 $AB = 5$ cm
 $BC = 8$ cm

AOC is a diameter of the circle.

Calculate the circumference of the circle.
 Give your answer correct to 3 significant figures.

..... cm

(Total for question = 4 marks)

Q11. CALCULATOR

Triangle ABC has perimeter 20 cm.

$AB = 7$ cm.

$BC = 4$ cm.

By calculation, deduce whether triangle ABC is a right-angled triangle.

(Total for question = 4 marks)

Q12. CALCULATOR

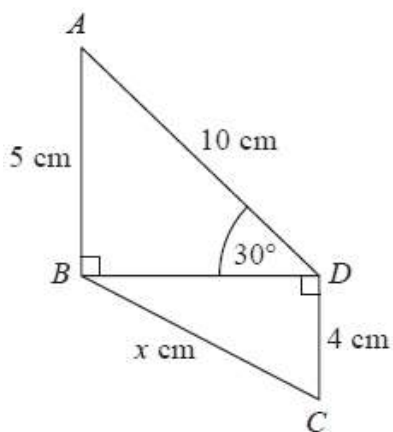


Diagram NOT accurately drawn

In the diagram,
 triangles ABD and BCD are right-angled triangles
 $AB = 5$ cm
 $AD = 10$ cm
 $CD = 4$ cm
 Angle $ADB = 30^\circ$

Work out the value of x .
 Give your answer correct to 2 decimal places.

.....cm

(Total for question = 4 marks)

Q13. CALCULATOR

$ABCD$ is a trapezium.

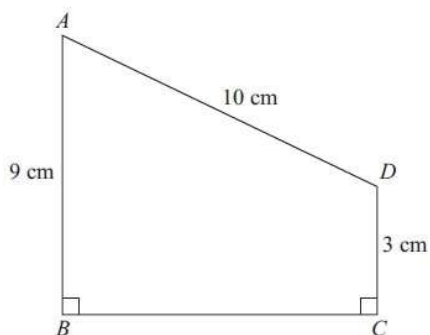


Diagram NOT accurately drawn

$AD = 10$ cm
 $AB = 9$ cm
 $DC = 3$ cm
 Angle $ABC = \text{angle } BCD = 90^\circ$

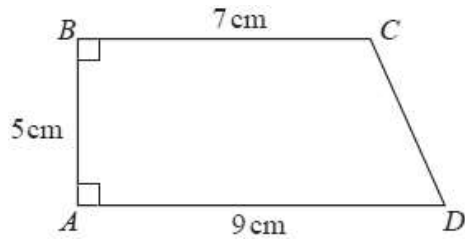
Calculate the length of AC .
 Give your answer correct to 3 significant figures.

.....

(Total for Question is 5 marks)

Q14. CALCULATOR

$ABCD$ is a trapezium.



A square has the same perimeter as this trapezium.

Work out the area of the square.

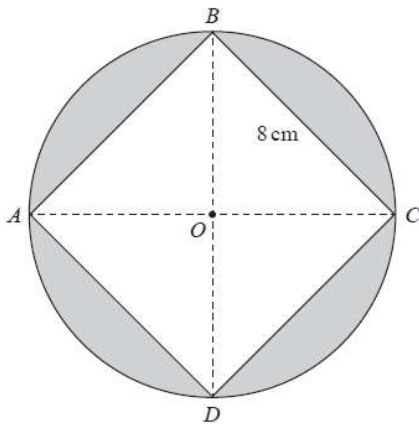
Give your answer correct to 3 significant figures.

..... cm^2

(Total for question is 5 marks)

Q15. CALCULATOR

The diagram shows a square $ABCD$ of side 8 cm inside a circle, centre O .



The vertices of the square lie on the circle.

Work out the total area of the four shaded segments.

Give your answer correct to 3 significant figures.

..... cm^2

(Total for question = 5 marks)

Q16. CALCULATOR

The diagram represents a metal frame.

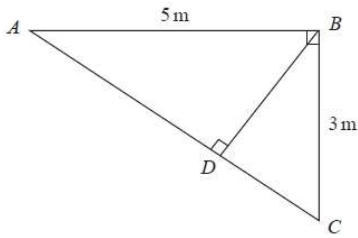


Diagram NOT accurately drawn

The frame is made from four metal bars, AB , AC , BC and BD .

Angle $ABC = \text{angle } ADB = 90^\circ$

$AB = 5 \text{ m}$

$BC = 3 \text{ m}$

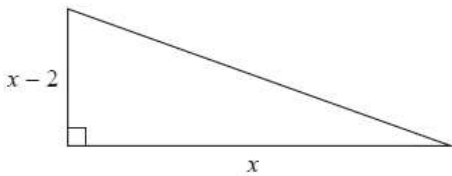
Work out the total length of the four metal bars of the frame.
Give your answer correct to 3 significant figures.

..... m

(Total for question = 5 marks)

Q17. CALCULATOR

Here is a right-angled triangle.



All measurements are in centimetres.

The area of the triangle is 2.5 cm^2 .

Find the perimeter of the triangle.

Give your answer correct to 3 significant figures.

You must show all of your working.

..... cm

(Total for question is 6 marks)