

GCSE QUESTIONS

Q1. CALCULATOR ALLOWED

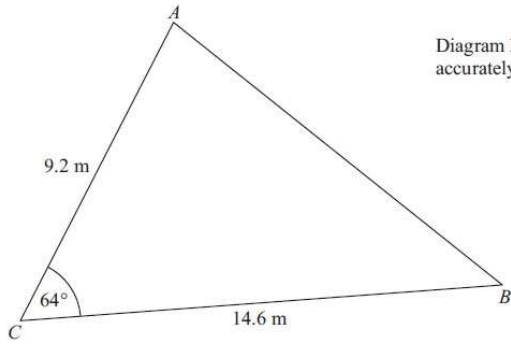


Diagram NOT accurately drawn

$AC = 9.2 \text{ m}$
 $BC = 14.6 \text{ m}$
 Angle $ACB = 64^\circ$

- (a) Calculate the area of the triangle ABC .
 Give your answer correct to 3 significant figures.

..... m²
 (2)

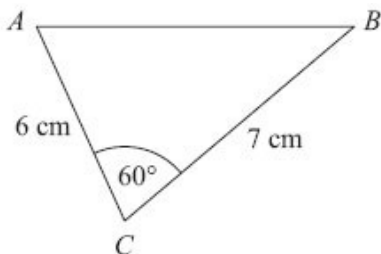
- (b) Calculate the length of AB .
 Give your answer correct to 3 significant figures.

.....
 (3)

(Total for Question is 5 marks)

Q2. CALCULATOR ALLOWED

ABC is a triangle.



- (a) Work out the area of triangle ABC .
 Give your answer correct to 3 significant figures.

..... cm²
(2)

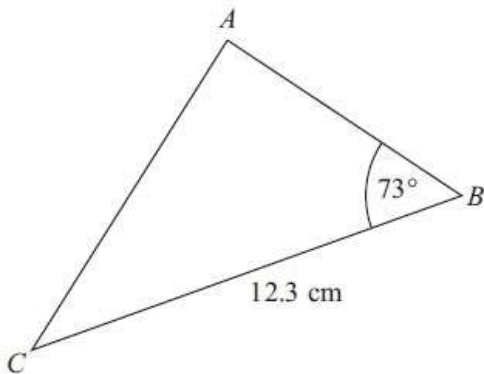
- (b) Work out the length of the side AB .
Give your answer correct to 3 significant figures.

.....
(3)

(Total for Question is 5 marks)

Q3. CALCULATOR ALLOWED

ABC is a triangle.



$BC = 12.3$ cm

Angle $ABC = 73^\circ$

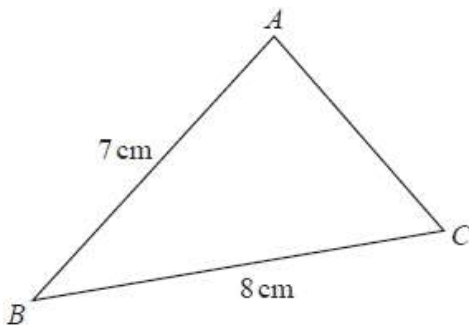
The area of triangle ABC is 50 cm².

Work out the length of AC .

Give your answer correct to 3 significant figures.

.....
(Total for Question is 6 marks)

Q4. CALCULATOR ALLOWED



ABC is an acute-angled triangle.

BA = 7 cm

BC = 8 cm

The area of triangle *ABC* is 18 cm².

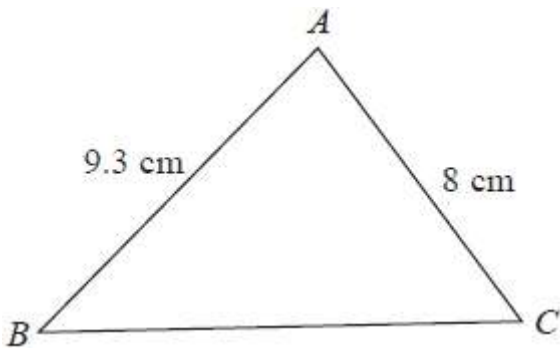
Work out the size of angle *BAC*.

Give your answer correct to 3 significant figures.

You must show all your working.

.....
(Total for question = 6 marks)

Q5. CALCULATOR ALLOWED



$AB = 9.3 \text{ cm}$

$AC = 8 \text{ cm}$

Angle BAC is an acute angle.

The area of triangle ABC is 32 cm^2 .

Work out the length of BC .

You must show your working.

Give your answer correct to 3 significant figures.

..... cm

(Total for question = 5 marks)

Q6. CALCULATOR ALLOWED

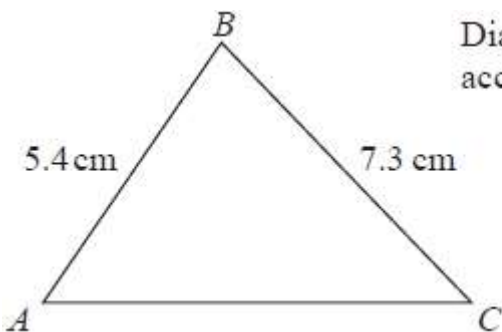


Diagram **NOT**
accurately drawn

ABC is an acute angled triangle.

The area of triangle ABC is 19 cm^2 .

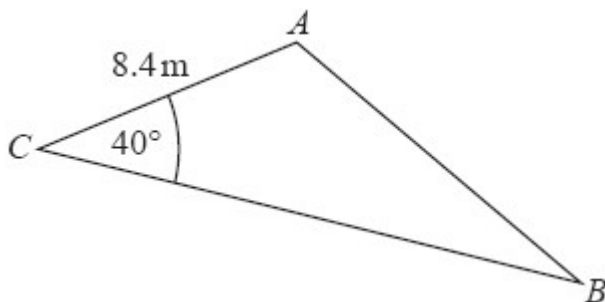
Work out the size of angle ACB .

Give your answer correct to 3 significant figures.

..... °

(Total for question = 6 marks)

Q7. CALCULATOR ALLOWED



ABC is a triangle.

$AC = 8.4\text{m}$

Angle $ACB = 40^\circ$

The area of the triangle = 100m^2 .

Work out the length of AB .

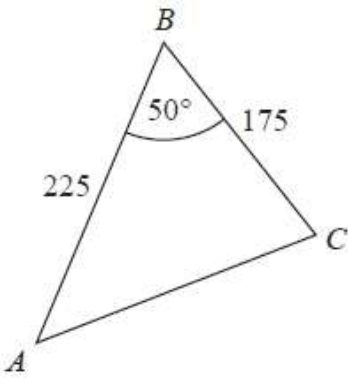
Give your answer correct to 3 significant figures.

You must show all your working.

..... m

(Total for question = 5 marks)

Q8. CALCULATOR ALLOWED



Jerry wants to cover a triangular field, ABC , with fertiliser.

Here are the measurements Jerry makes

angle $ABC = 50^\circ$ correct to the nearest degree,

$BA = 225$ m correct to the nearest 5 m,

$BC = 175$ m correct to the nearest 5 m.

Work out the upper bound for the area of the field.

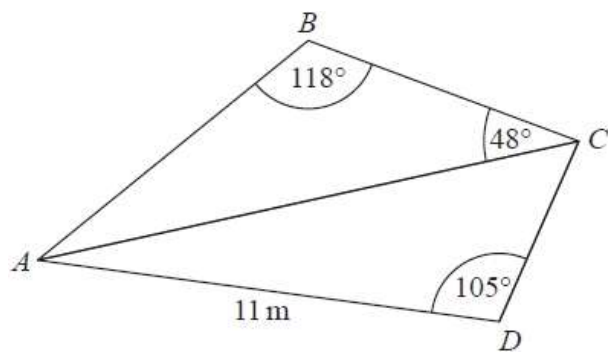
You must show your working.

.....m²

(Total for Question is 3 marks)

Q9. CALCULATOR ALLOWED

ABC and ADC are triangles.



The area of triangle ADC is 56 m^2

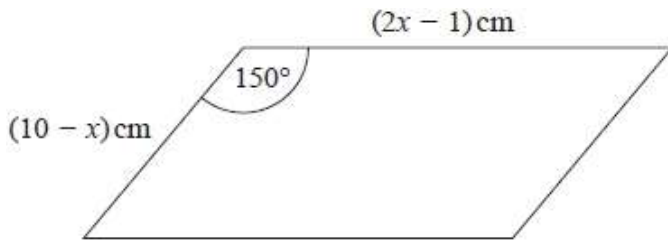
Work out the length of AB .

Give your answer correct to 1 decimal place.

..... m

(Total for question = 5 marks)

Q10. CALCULATOR ALLOWED



The diagram shows a parallelogram.

The area of the parallelogram is greater than 15 cm^2

(a) Show that $2x^2 - 21x + 40 < 0$

(b) Find the range of possible values of x .

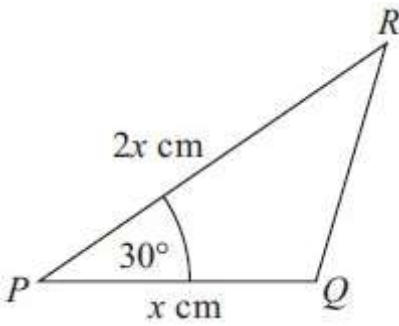
(3)

.....

(3)

(Total for question = 6 marks)

Q11. CALCULATOR ALLOWED



The diagram shows the triangle PQR .

$PQ = x$ cm

$PR = 2x$ cm

Angle $QPR = 30^\circ$

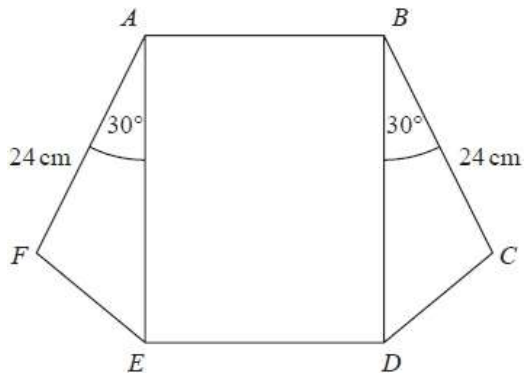
The area of triangle $PQR = A$ cm²

Show that $x = \sqrt{2A}$

(Total for Question is 3 marks)

Q12. CALCULATOR ALLOWED

The diagram shows a rectangle, $ABDE$, and two congruent triangles, AFE and BCD .



area of rectangle $ABDE =$ area of triangle $AFE +$ area of triangle BCD

$AB : AE = 1 : 3$

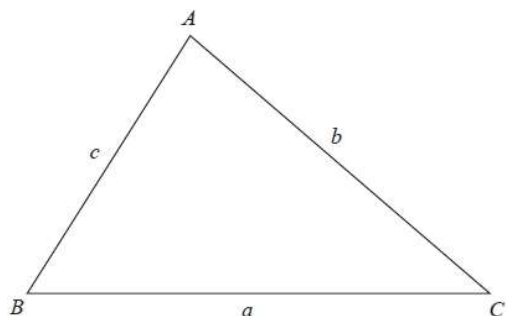
Work out the length of AE .

..... cm

(Total for question = 4 marks)

Q13. CALCULATOR ALLOWED

The diagram shows an acute-angled triangle ABC .



Prove that area of triangle $ABC = \frac{1}{2}ab \sin C$

(Total for question = 3 marks)