

G286 Area of any triangle

Q1.

* The diagram shows the triangle PQR .

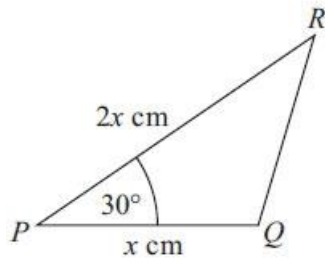


Diagram **NOT**
accurately drawn

$PQ = x$ 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)

Q2.

Here is a parallelogram.

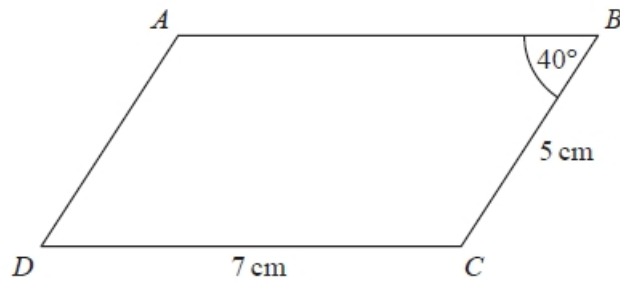


Diagram NOT accurately drawn

$DC = 7 \text{ cm}$. $CB = 5 \text{ cm}$. Angle ABC is 40°

Work out the area of the parallelogram.
Give your answer correct to 1 decimal place.

..... cm^2

(Total for question = 3 marks)

Q3.

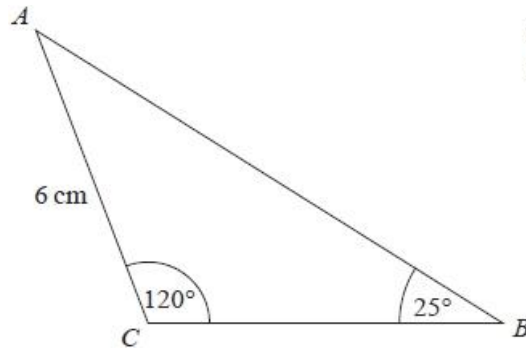


Diagram NOT
accurately drawn

In triangle ABC ,
 $AC = 6$ cm
Angle $ACB = 120^\circ$
Angle $ABC = 25^\circ$

Work out the area of triangle ABC .
Give your answer correct to 1 decimal place.
You must show all your working.

..... cm^2

(Total for question = 4 marks)

Q4.

In triangle RPQ ,

$$RP = 8.7 \text{ cm}$$

$$PQ = 5.2 \text{ cm}$$

$$\text{Angle } PRQ = 32^\circ$$

(a) Assuming that angle PQR is an acute angle, calculate the area of triangle RPQ .

Give your answer correct to 3 significant figures.

.....cm²

(4)

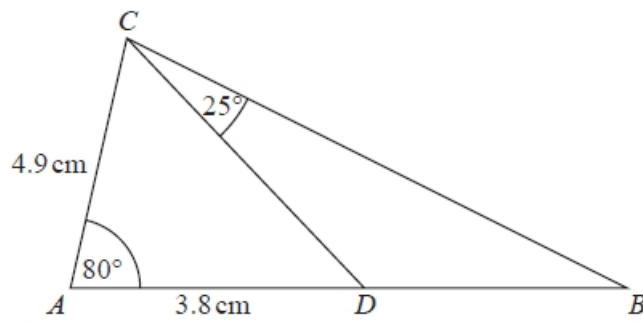
(b) If you did not know that angle PQR is an acute angle, what effect would this have on your calculation of the area of triangle RPQ ?

.....
.....
.....

(1)

(Total for question = 5 marks)

Q5.



ABC is a triangle.
D is a point on *AB*.

Work out the area of triangle *BCD*.
Give your answer correct to 3 significant figures.

..... cm²

(Total for question = 5 marks)

Q6.

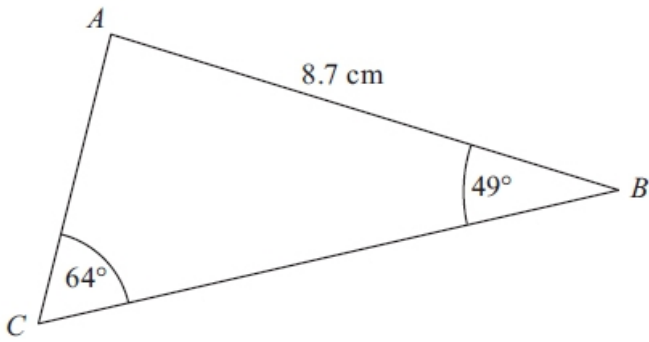


Diagram **NOT** accurately drawn

ABC is a triangle.

$AB = 8.7$ cm.

Angle $ABC = 49^\circ$.

Angle $ACB = 64^\circ$.

Calculate the area of triangle *ABC*.

Give your answer correct to 3 significant figures.

..... cm²

(Total for Question is 5 marks)

Q7.

ABC is a triangle.

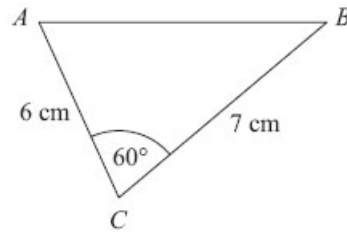


Diagram **NOT**
accurately drawn

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

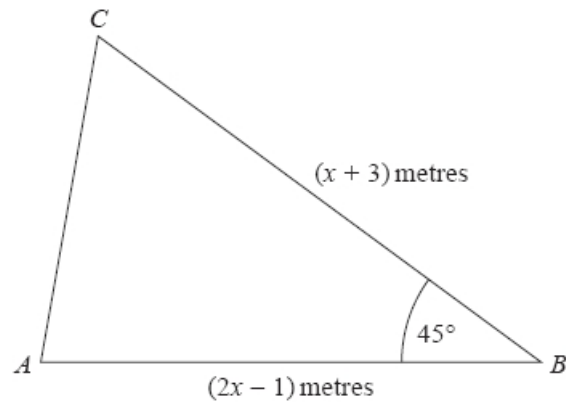
..... cm^2
(2)

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

..... (3)

(Total for Question is 5 marks)

Q8.



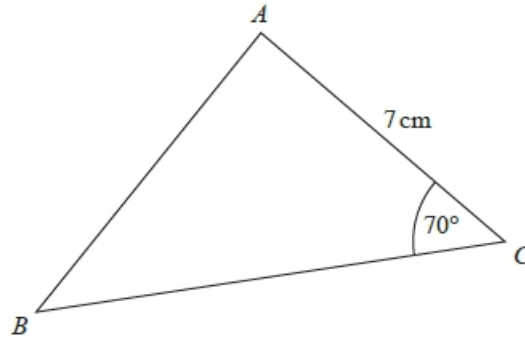
The area of triangle ABC is $6\sqrt{2} \text{ m}^2$.

Calculate the value of x .

Give your answer correct to 3 significant figures.

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

Q9.



The area of triangle ABC is 42 cm^2

Find the length of AB .

Give your answer correct to 3 significant figures.

..... cm

(Total for question = 5 marks)

Q10.

ABC is a triangle.

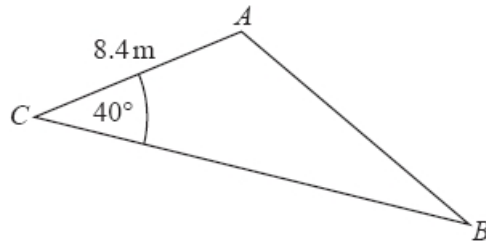


Diagram **NOT**
accurately drawn

$AC = 8.4\text{m}$

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)

Q11.

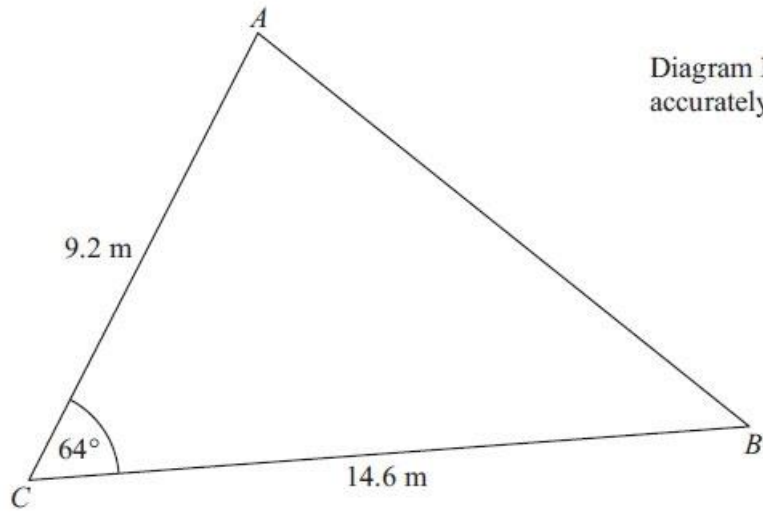


Diagram NOT
accurately drawn

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

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

..... m^2
(2)

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

.....
(3)

(Total for Question is 5 marks)

Q12.

ABC is a triangle.

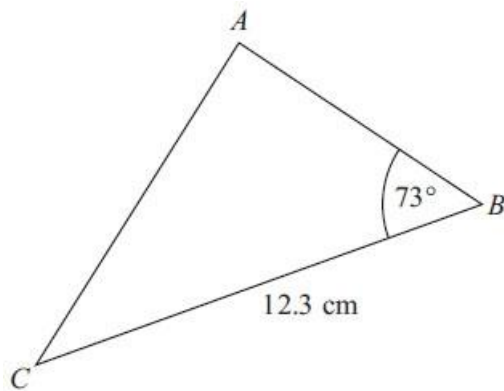


Diagram **NOT**
accurately drawn

$BC = 12.3$ cm

Angle $ABC = 73^\circ$

The area of triangle ABC is 50 cm².

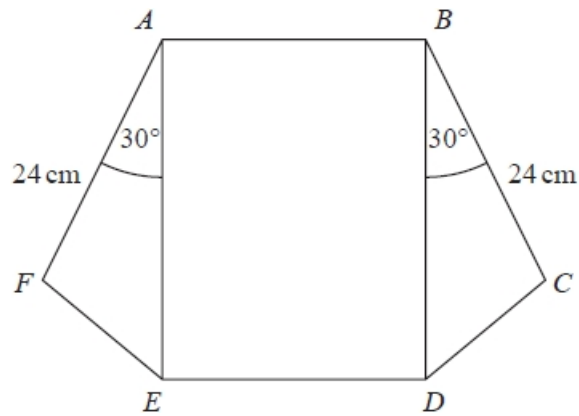
Work out the length of AC .

Give your answer correct to 3 significant figures.

(Total for Question is 6 marks)

Q13.

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)