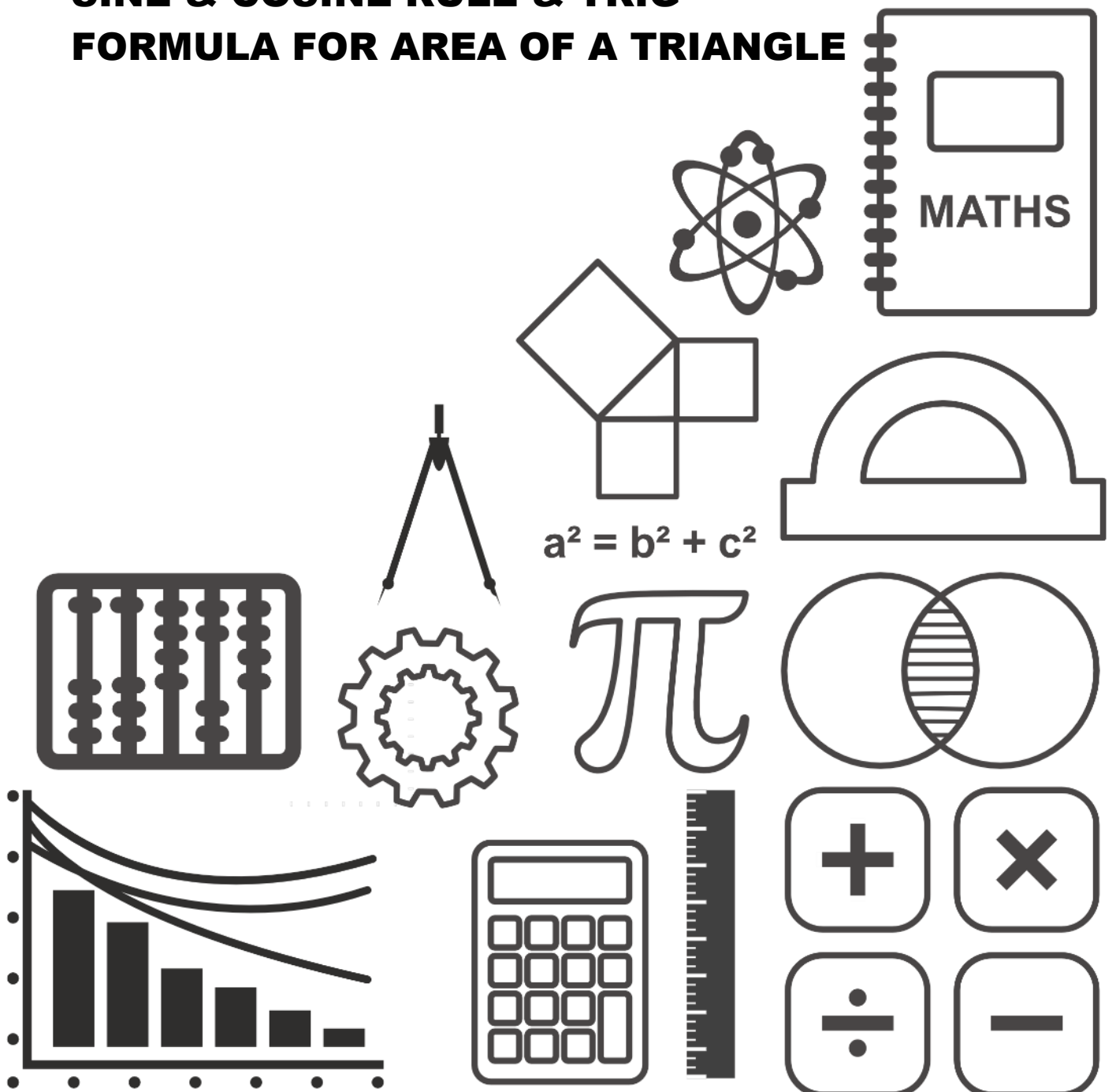
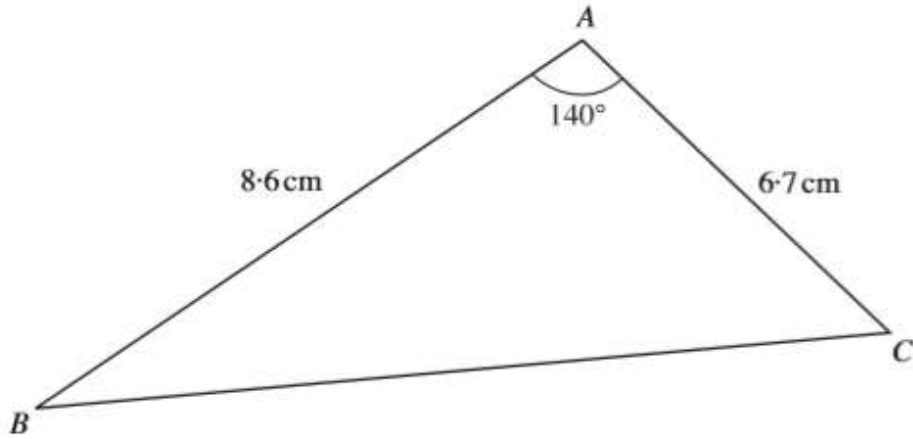


# MATHSDIY

## GCSE TOPIC BOOKLET SINE & COSINE RULE & TRIG FORMULA FOR AREA OF A TRIANGLE



1.



*Diagram not drawn to scale.*

(a) Find  $BC$ .

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[3]

(b) Calculate the area of triangle  $ABC$ .

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[2]

(c) Hence, find the perpendicular distance between  $A$  and  $BC$ .

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[2]

2. The diagram shows triangle  $PQR$ .

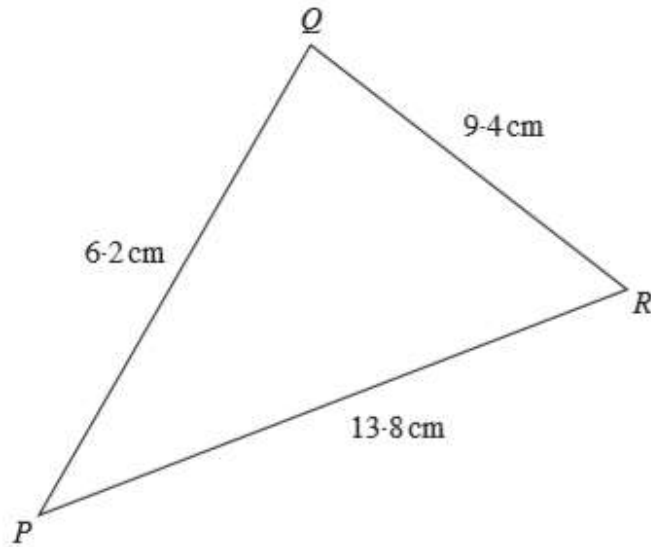


Diagram not drawn to scale.

The triangle  $PQR$  is such that  $QR = 9.4$  cm,  $PR = 13.8$  cm and  $PQ = 6.2$  cm.

(a) Find the size of  $\hat{PQR}$ .

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[3]

(b) Find the area of triangle  $PQR$ , clearly indicating the units of your answer.

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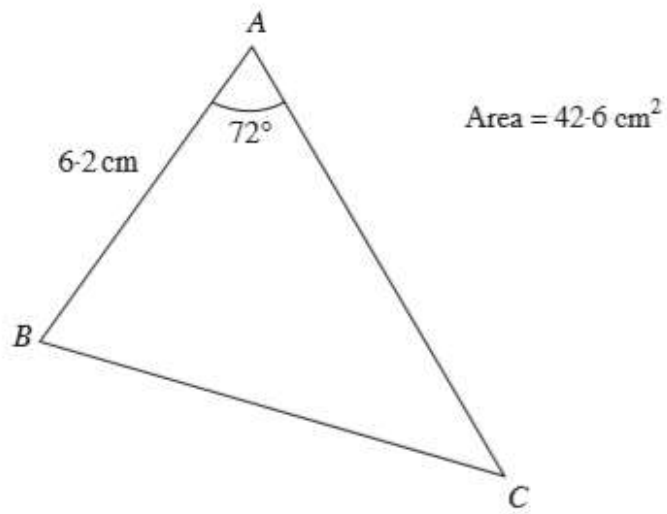
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[3]

3. The diagram shows triangle  $ABC$ .



*Diagram not drawn to scale.*

Given that  $\widehat{BAC} = 72^\circ$ ,  $AB = 6.2 \text{ cm}$  and that the area of the triangle  $ABC$  is  $42.6 \text{ cm}^2$ , find  $BC$ .

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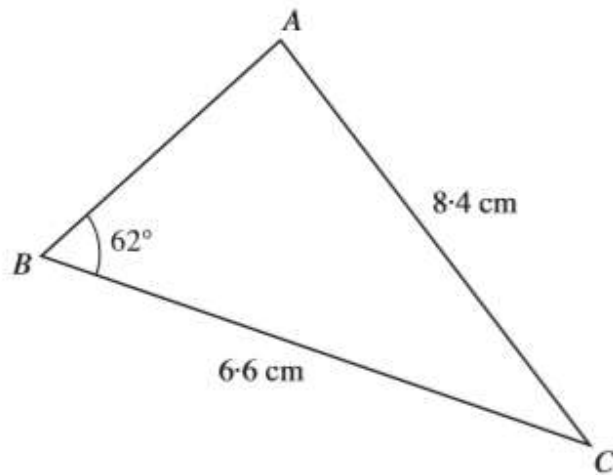
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[6]

4. The diagram shows triangle  $ABC$ .



*Diagram not drawn to scale.*

You are given that  $BC = 6.6$  cm,  $AC = 8.4$  cm and  $\widehat{ABC} = 62^\circ$ .

(a) Calculate the size of the acute angle  $BAC$ .

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(b) Calculate the area of the triangle  $ABC$ .

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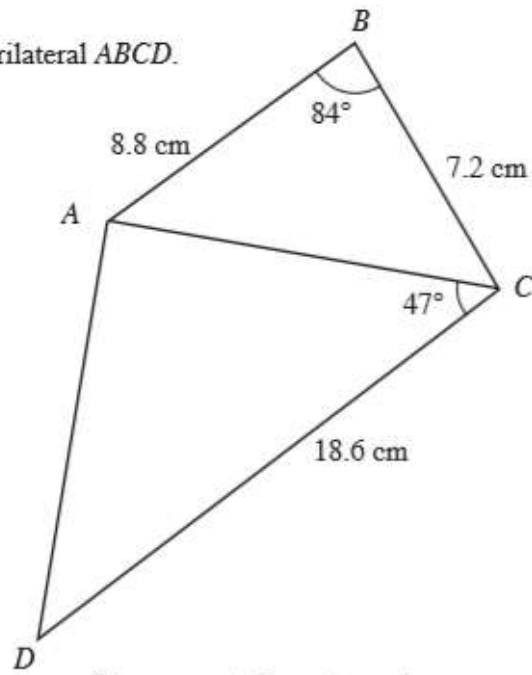
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[3]

5. The diagram shows quadrilateral  $ABCD$ .



*Diagram not drawn to scale.*

Given that  $AB = 8.8 \text{ cm}$ ,  $BC = 7.2 \text{ cm}$ ,  $CD = 18.6 \text{ cm}$ ,  $\widehat{ABC} = 84^\circ$  and  $\widehat{ACD} = 47^\circ$ , calculate the area of the triangle  $ACD$ .

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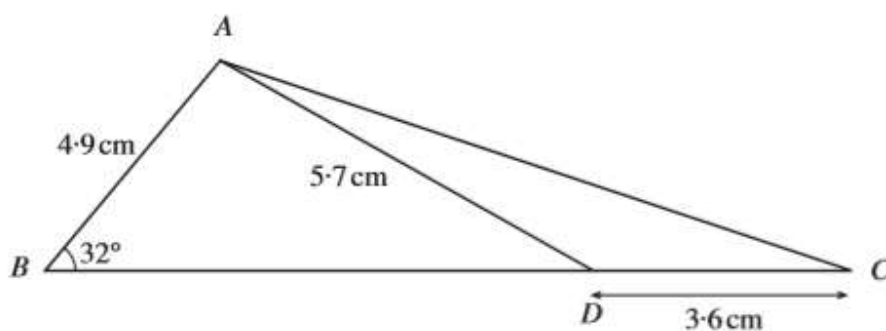
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[6]

6. The diagram shows a triangle  $ABC$  with  $D$  a point on  $BC$ .



*Diagram not drawn to scale.*

Given that  $\widehat{ABD} = 32^\circ$ ,  $AB = 4.9$  cm,  $AD = 5.7$  cm and  $DC = 3.6$  cm, calculate the area of triangle  $ADC$ .

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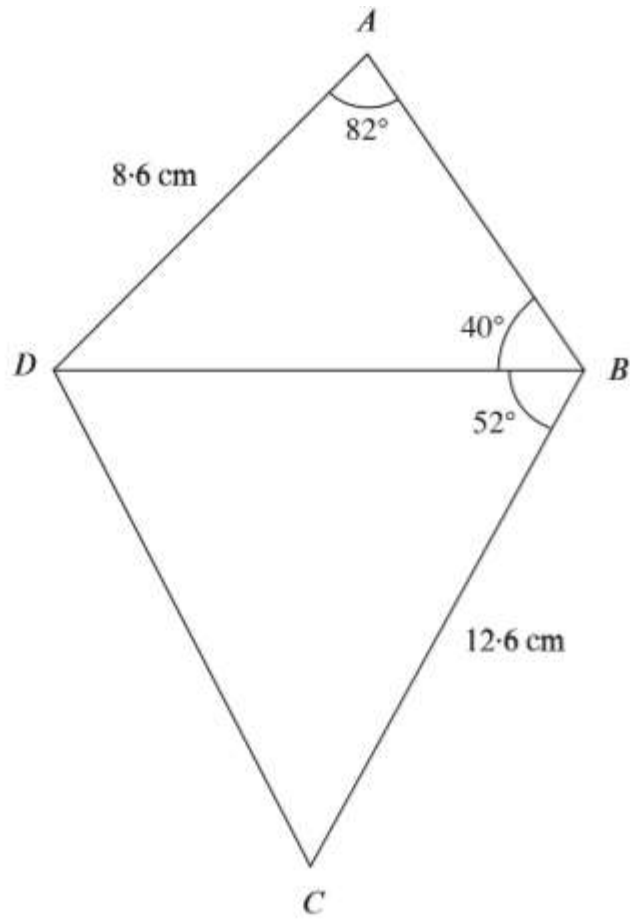


Diagram not drawn to scale.

Find the length of  $DC$ .

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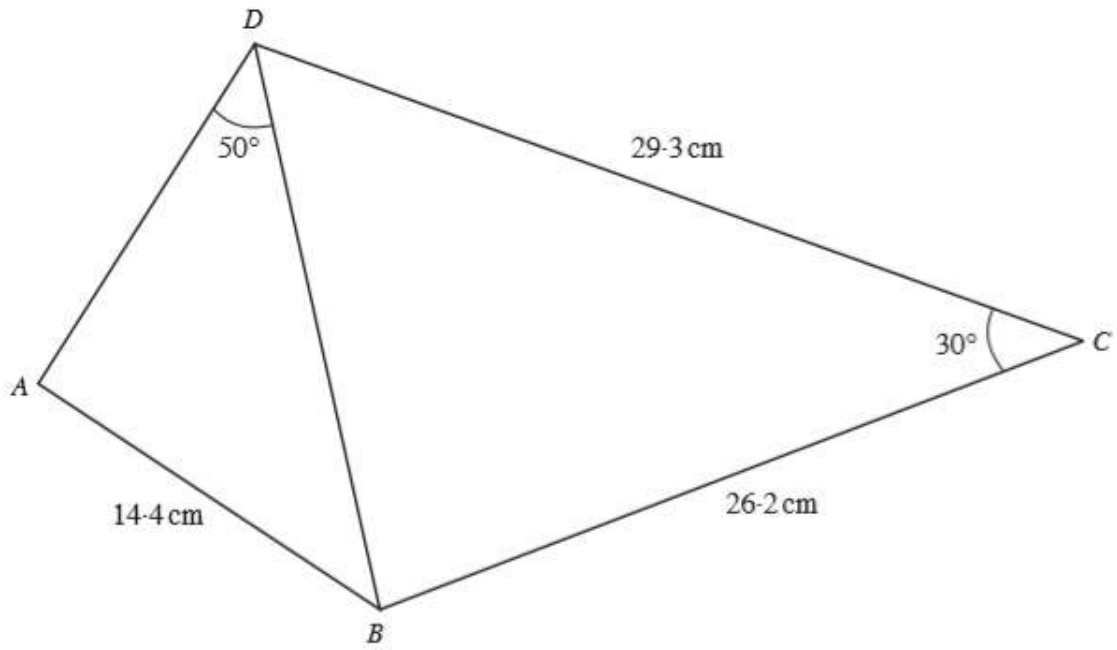
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[7]



8. The triangles  $ADB$  and  $BDC$  are such that  $BC = 26.2$  cm,  $CD = 29.3$  cm,  $AB = 14.4$  cm,  $\hat{ADB} = 50^\circ$  and  $\hat{DCB} = 30^\circ$ .



*Diagram not drawn to scale.*

Find the size of  $\hat{DAB}$ .

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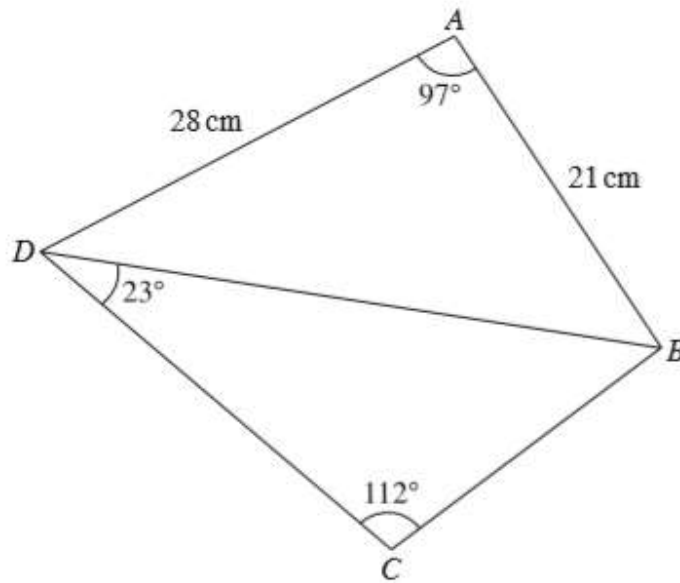
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[6]

9. The diagram shows a quadrilateral  $ABCD$ .



*Diagram not drawn to scale.*

Find the length of  $BC$ , giving your answer to a suitable degree of accuracy.

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