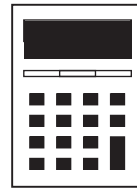


# GCSE MATHEMATICS

# Sine Rule



These questions have been taken or modified from previous AQA GCSE Mathematics Papers.

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## Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Answer all questions.
- You must answer the questions in the spaces provided.
- If your calculator does not have a  $\pi$  button, take the value of  $\pi$  to be 3.14 unless another value is given in the question.

## Information

- The marks for questions are shown in brackets.
- The quality of your written communication is specifically assessed in questions that are indicated with an asterisk (\*).

## Advice

- Read each question carefully before you start to answer it.
- In all calculations, show clearly how you work out your answer.
- Use the number of marks for the question as a guide to the amount of time you need to spend.
- Look at previous parts of the question, e.g. a), b), c) i) as there may be information there you need to answer later parts.
- Check your answer is realistic and appropriate.
- For calculator decimal numbers always write your full calculator display in the working out area and then, if you need to, round the answer on the answer line.

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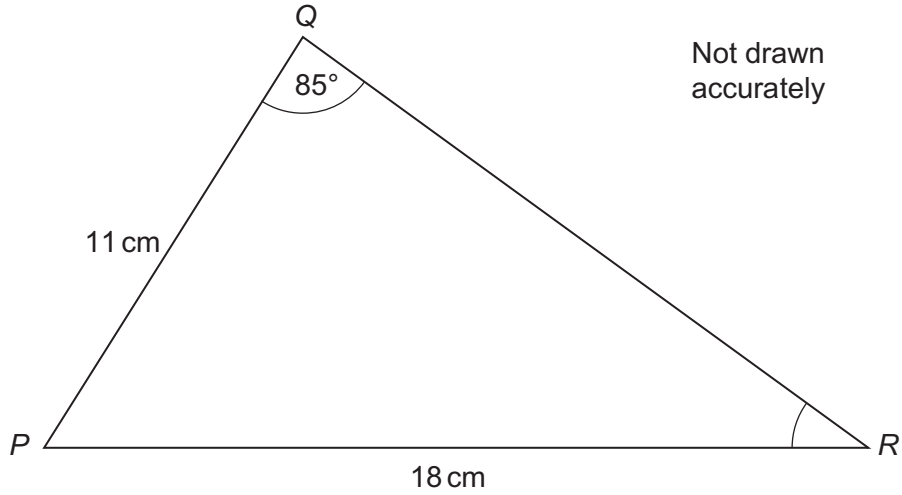
This booklet was curated and modified using AQA examination papers between 2010-2016, for [thecalculatorguide.com](http://thecalculatorguide.com), where you can find many more booklets on further topics. All questions used are reproduced for educational purposes only.



[www.thecalculatorguide.com](http://www.thecalculatorguide.com)

1

Work out the size of angle  $QRP$ .



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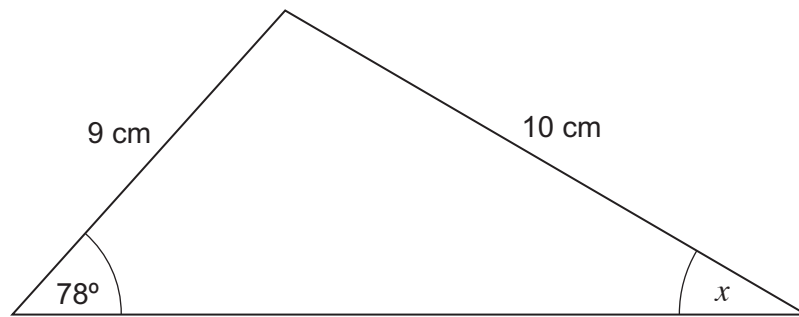
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Answer ..... degrees (3 marks)

2

Work out the size of angle  $x$ .



Not drawn accurately

[3 marks]

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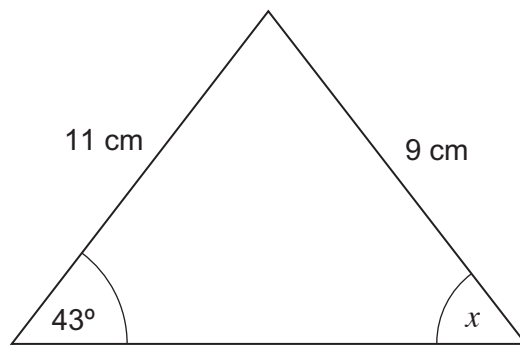
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Answer ..... degrees

3

In the triangle  $x$  is an acute angle.



Not drawn accurately

Work out the size of angle  $x$ .

[3 marks]

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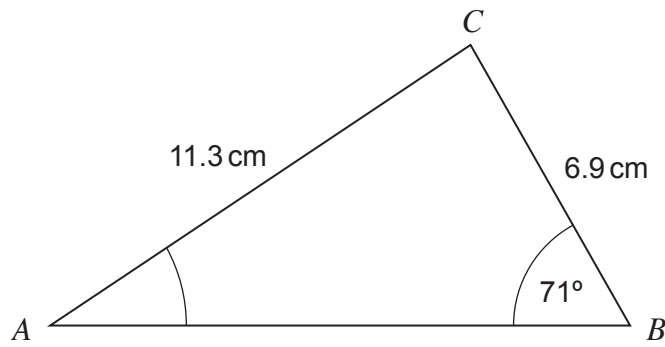
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Answer \_\_\_\_\_ degrees

4

Work out the size of angle  $A$ .



Not drawn accurately

Give your answer to a suitable degree of accuracy.

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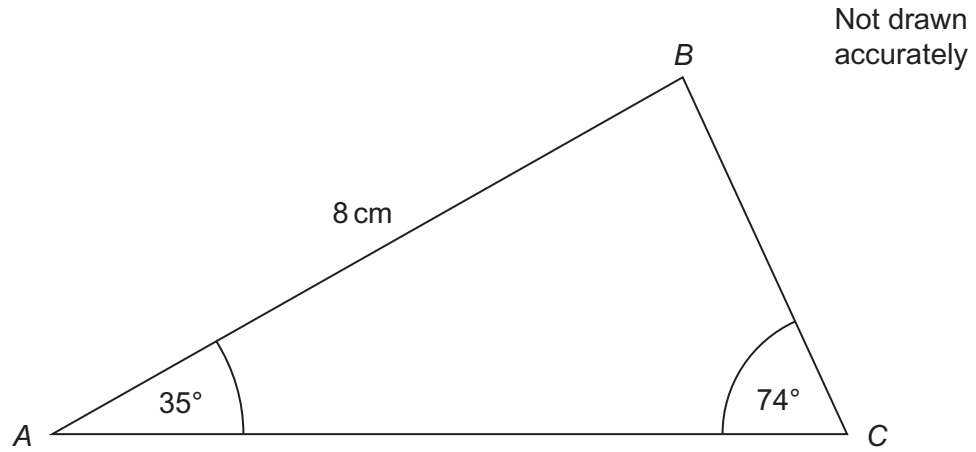
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Answer ..... degrees (4 marks)

5



Use the sine rule to work out the length  $BC$ .

[3 marks]

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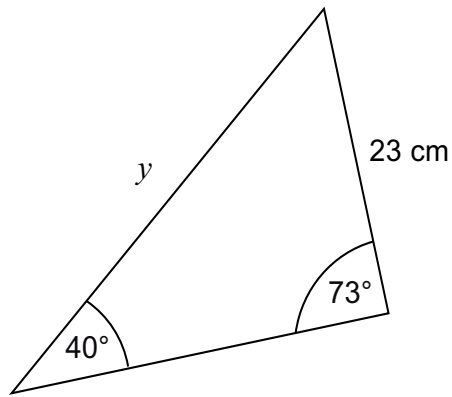
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Answer ..... cm

6

Work out length  $y$ .



Not drawn accurately

[3 marks]

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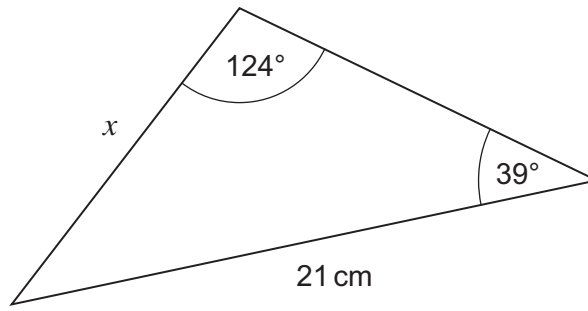
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Answer \_\_\_\_\_ cm

7

Work out the length  $x$ .



Not drawn accurately

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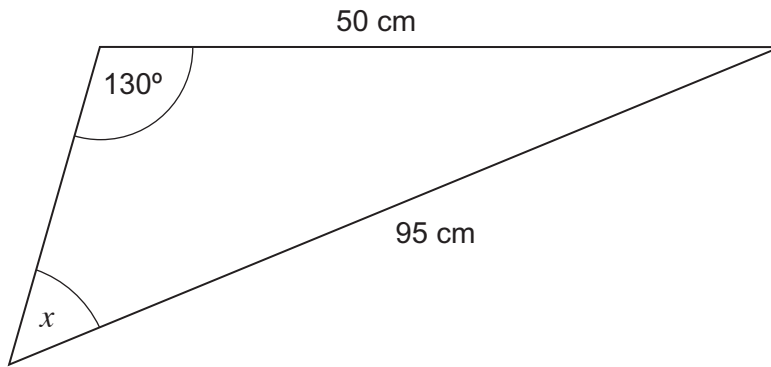
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Answer ..... cm (3 marks)



8

Work out the size of angle  $x$ .



Not drawn accurately

[3 marks]

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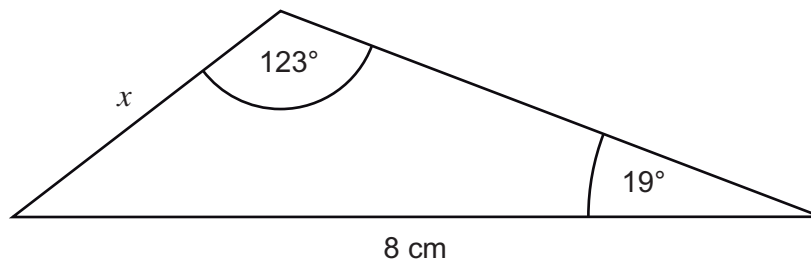
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Answer ..... degrees

9 (a) Work out the length  $x$ .

[3 marks]

Not drawn accurately



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Answer \_\_\_\_\_ cm

9 (b) Circle the statements that are true.

[2 marks]

$\sin 123^\circ = \sin 57^\circ$

$\sin 123^\circ = \cos 57^\circ$

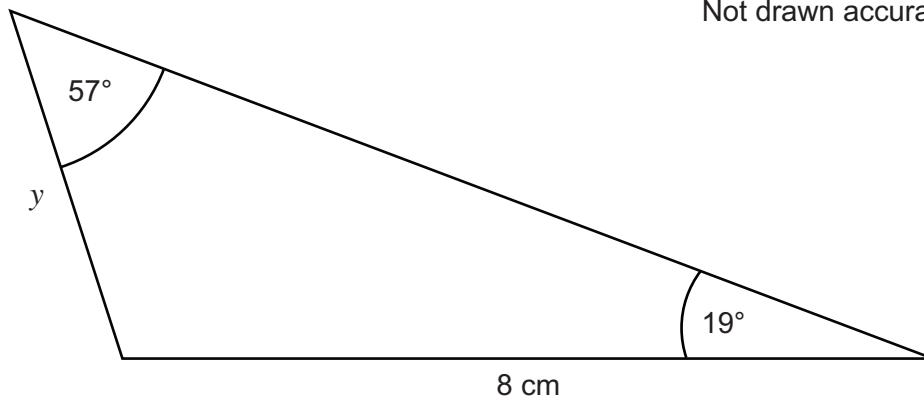
$\cos 123^\circ = \cos 57^\circ$

$\cos 123^\circ = -\cos 57^\circ$

9 (c) Work out the length  $y$ .

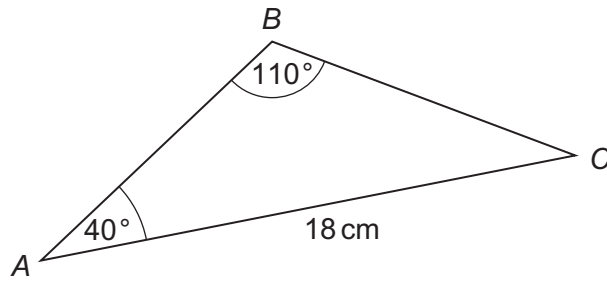
[1 mark]

Not drawn accurately



Answer \_\_\_\_\_ cm

10 Work out the length  $BC$ .



Not drawn accurately

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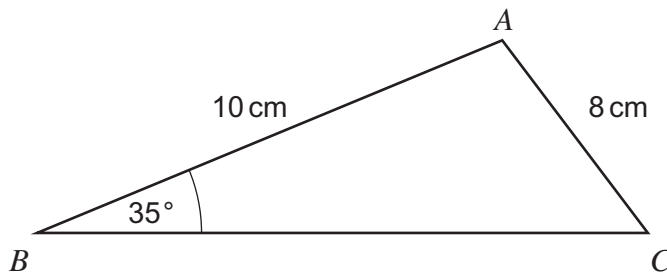
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Answer ..... cm (3 marks)

11 In the diagram, angle A is obtuse.



Not drawn accurately

Work out the size of angle A.

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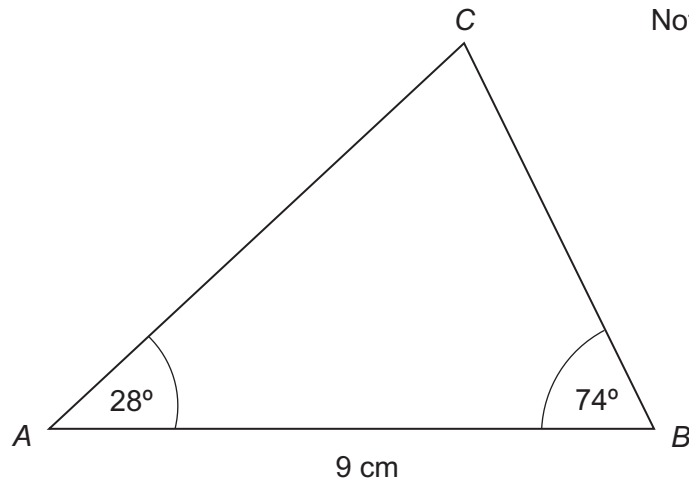
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Answer ..... degrees (4 marks)

12

Not drawn accurately



Work out the length of  $BC$ .

[4 marks]

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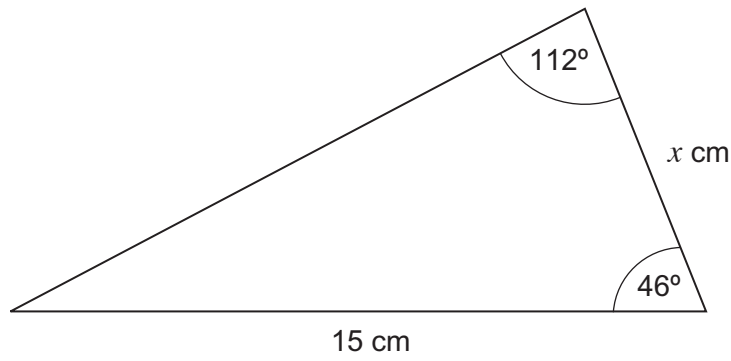
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Answer ..... cm

13

Not drawn  
accurately



Work out the value of  $x$ .

**[4 marks]**

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Answer .....