

GCSE Mathematics

H

The Sine Rule

Higher Tier | Grades 6-8

Total Marks	Time	Questions
56	56 min	20

Instructions:

- Do not use a calculator when you see: 
- Answer all questions in the spaces provided.
- Show all your working - marks are awarded for method as well as final answers.
- Cross through any work you do not want to be marked.
- Check your answers if you have time at the end.

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Edexcel-style questions**Q1**

Grade 6

Edexcel style

Find the length of side b. Give your answer correct to 3 significant figures.

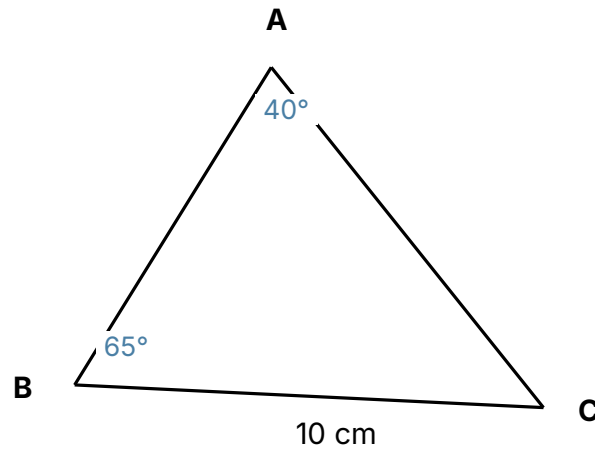


Diagram NOT accurately drawn

Answer _____

Q2

Grade 7

Edexcel style

Find the size of angle B. Give your answer correct to 1 decimal place.

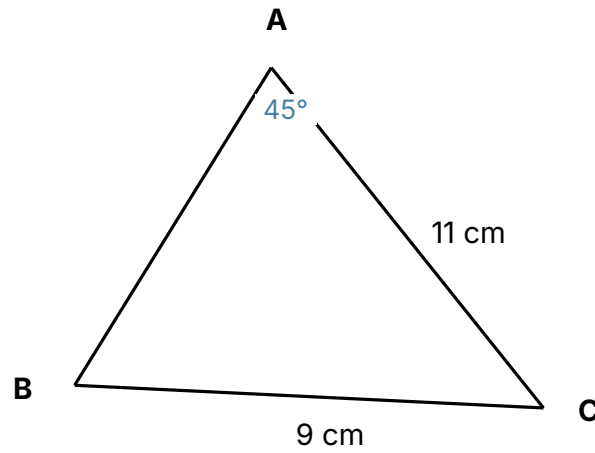


Diagram NOT accurately drawn

Answer _____

Q3

Grade 7

Edexcel style

Find the length of side c . Give your answer correct to 3 significant figures.

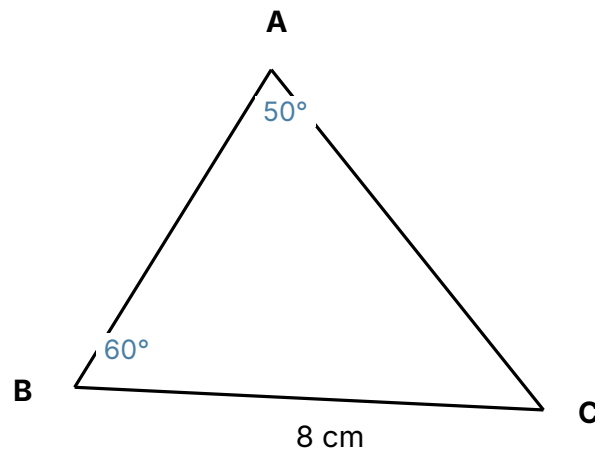


Diagram NOT accurately drawn

Answer _____

teachably

[3 marks]**Q4**

Grade 6

Edexcel style

In triangle PQR, $PQ = 8\text{ cm}$, $QR = 10\text{ cm}$ and angle $Q = 55^\circ$ (the angle between PQ and QR). State, giving a reason, whether you would use the sine rule or the cosine rule to find PR.

Answer _____

teachably

[2 marks]

Q5

Grade 8

Edexcel style

A triangular field has vertices P, Q and R. $PQ = 45$ m, angle P = 52° and angle Q = 71° . Find the length QR. Give your answer correct to 3 significant figures.

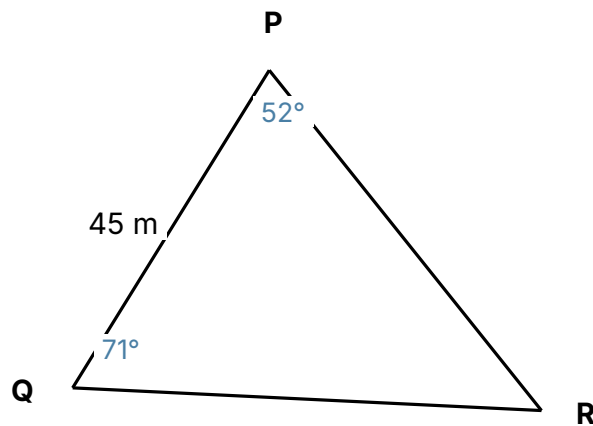


Diagram NOT accurately drawn

Answer _____

AQA-style questions**Q6**

Grade 6

AQA style

Find the length of side b. Give your answer correct to 3 significant figures.

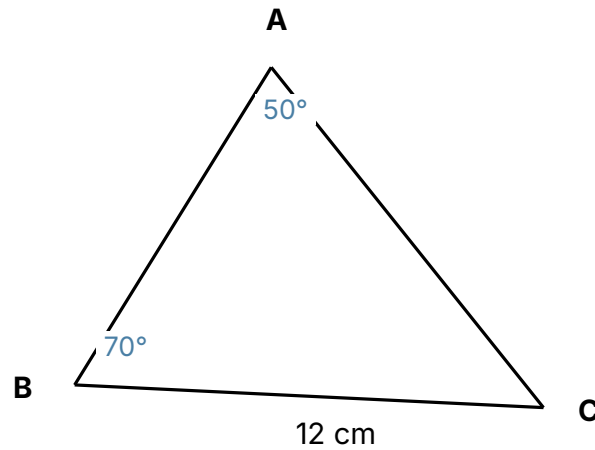


Diagram NOT accurately drawn

Answer _____

Q7

Grade 7

AQA style

Find the size of angle B. Give your answer correct to 1 decimal place.

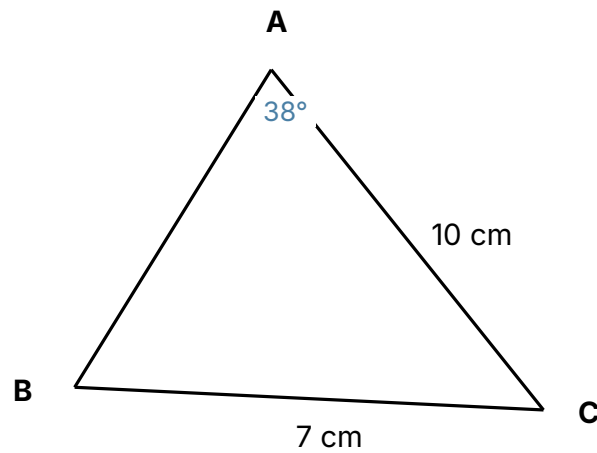


Diagram NOT accurately drawn

Answer _____

Q8

Grade 7

AQA style

Find the length of side c . Give your answer correct to 3 significant figures.

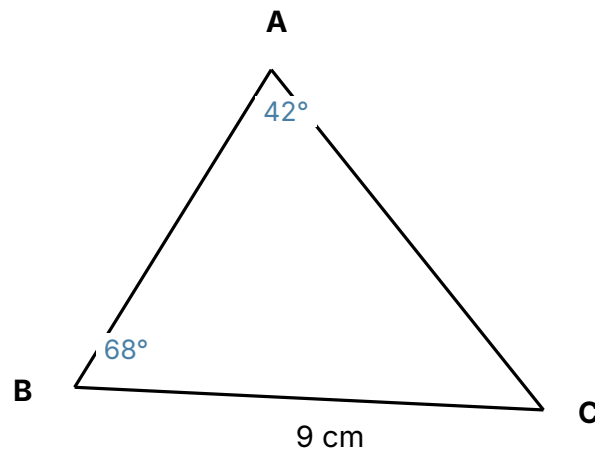


Diagram NOT accurately drawn

Answer _____

teachably

[3 marks]**Q9**

Grade 6

AQA style

In triangle PQR, angle $P = 40^\circ$, $PQ = 9$ cm and angle $Q = 65^\circ$. State, giving a reason, whether you would use the sine rule or the cosine rule to find QR.

Answer _____

teachably

[2 marks]

Q10

Grade 8

AQA style

A triangular field has vertices P, Q and R. $PQ = 38$ m, angle P = 48° and angle Q = 63° . Find the length QR. Give your answer correct to 3 significant figures.

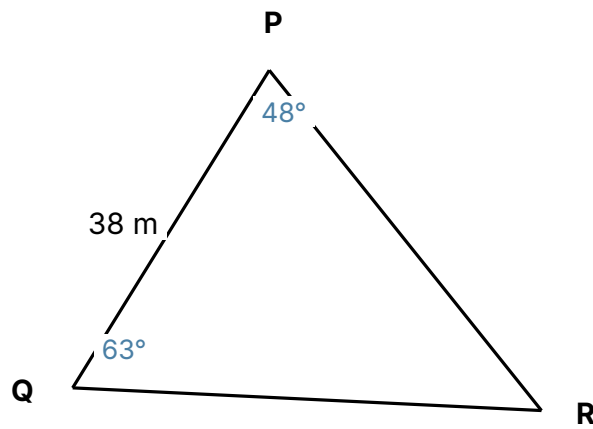


Diagram NOT accurately drawn

Answer _____

OCR-style questions

Q11

Grade 6

OCR style

Find the length of side b. Give your answer correct to 3 significant figures.

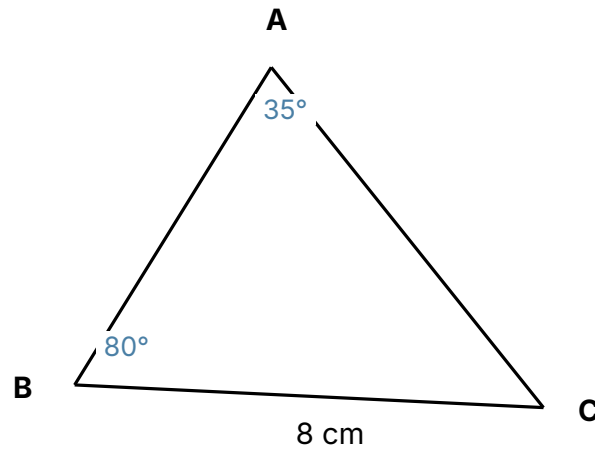


Diagram NOT accurately drawn

Answer _____

Q12

Grade 7

OCR style

Find the size of angle B. Give your answer correct to 1 decimal place.

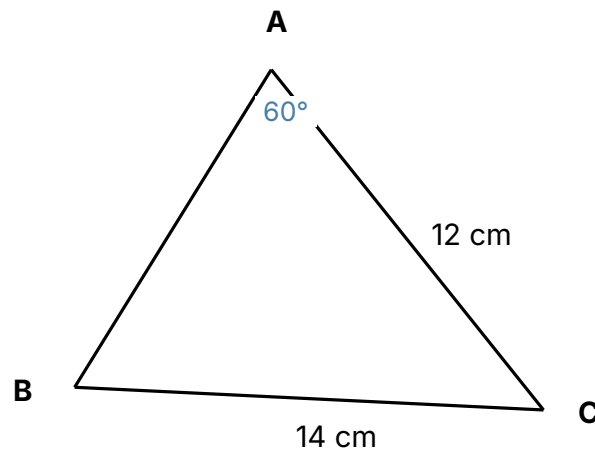


Diagram NOT accurately drawn

Answer _____

Q13

Grade 8

OCR style

Find the length of side c . Give your answer correct to 3 significant figures.

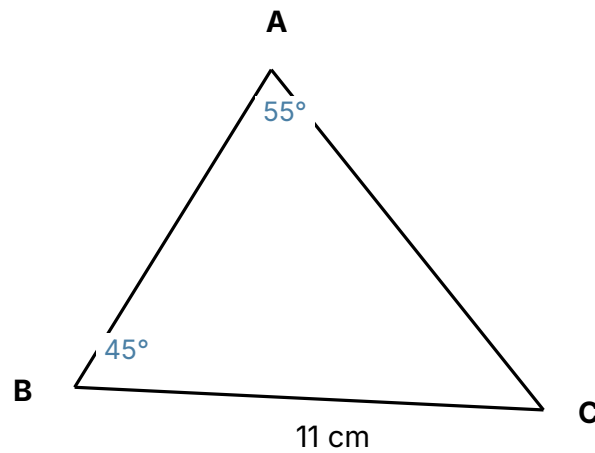


Diagram NOT accurately drawn

Answer _____

teachably

[3 marks]**Q14**

Grade 7

OCR style

In triangle PQR, $PQ = 6$ cm, $QR = 7$ cm and $PR = 9$ cm (all three sides). State, giving a reason, whether you would use the sine rule or the cosine rule to find angle Q.

Answer _____

teachably

[2 marks]

Q15

Grade 8

OCR style

A triangular field has vertices P, Q and R. $PQ = 52$ m, angle P = 60° and angle Q = 55° . Find the length QR. Give your answer correct to 3 significant figures.

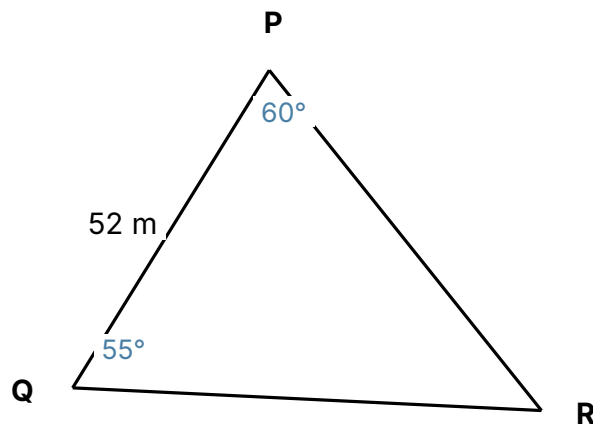


Diagram NOT accurately drawn

Answer _____

Teachably-style questions**Q16**

Grade 6

Teachably style

Find the length of side b. Give your answer correct to 3 significant figures.

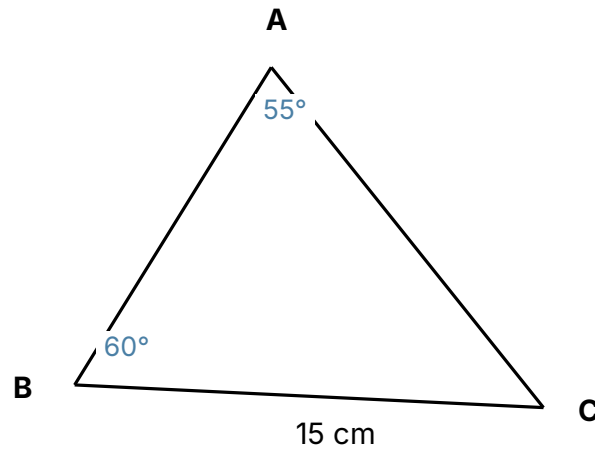


Diagram NOT accurately drawn

Answer _____

teachably

[3 marks]

Q17

Grade 7

Teachably style

Find the size of angle B. Give your answer correct to 1 decimal place.

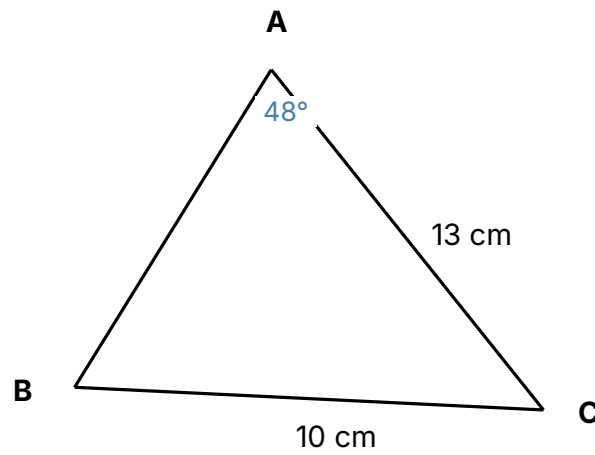


Diagram NOT accurately drawn

Answer _____

Q18

Grade 8

Teachably style

Find the length of side c . Give your answer correct to 3 significant figures.

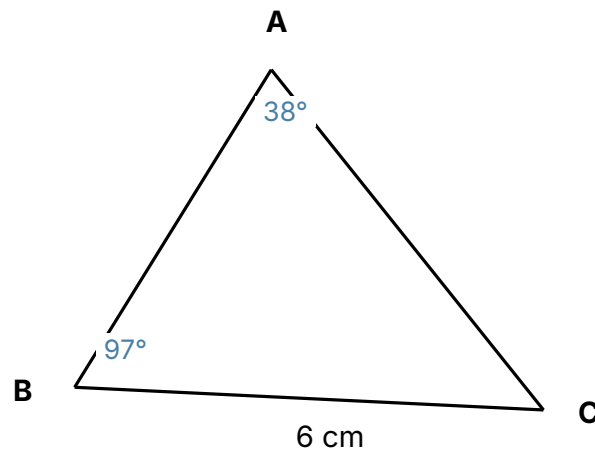


Diagram NOT accurately drawn

Answer _____

teachably

[3 marks]**Q19**

Grade 7

Teachably style

In triangle PQR, $PQ = 12\text{ cm}$, $QR = 15\text{ cm}$ and angle $P = 50^\circ$ (opposite QR). State, giving a reason, whether you would use the sine rule or the cosine rule to find angle R.

Answer _____

teachably

[2 marks]

Q20

Grade 8

Teachably style

A triangular field has vertices P, Q and R. $PQ = 29$ m, angle P = 44° and angle Q = 82° . Find the length QR. Give your answer correct to 3 significant figures.

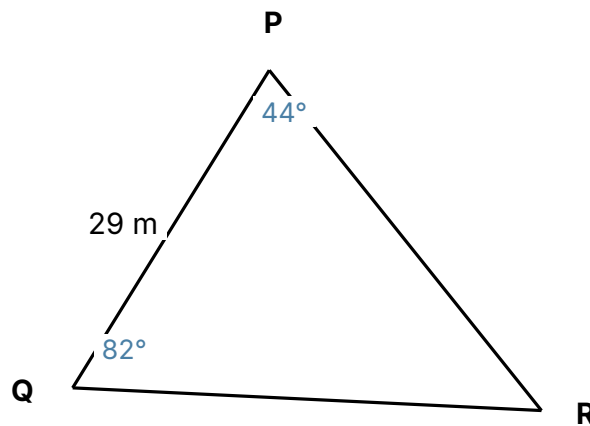


Diagram NOT accurately drawn

Answer _____

teachably

[3 marks]

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