

GCSE Mathematics

H

The Cosine Rule

Higher Tier | Grades 6-8

Total Marks	Time	Questions
60	60 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 a. Give your answer correct to 3 significant figures.

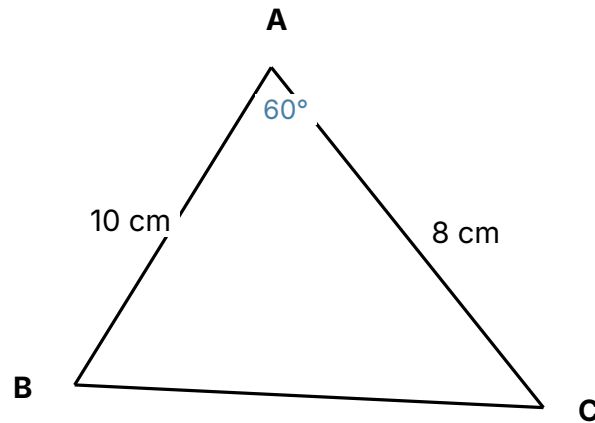


Diagram NOT accurately drawn

Answer _____

Q2

Grade 7

Edexcel style

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

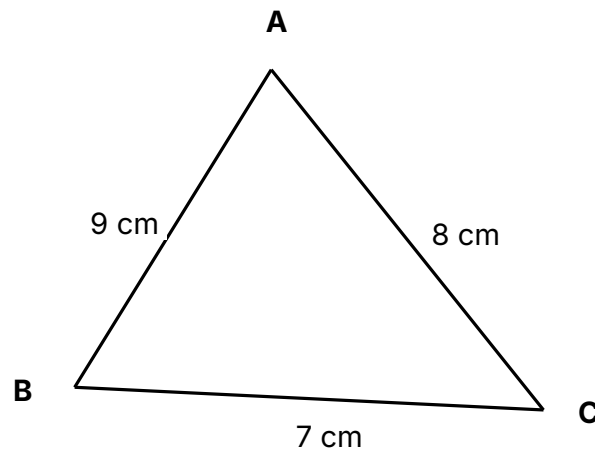


Diagram NOT accurately drawn

Answer _____

Q3

Grade 7

Edexcel style

A boat sails 15 km from port A to port B, then 20 km from B to port C. Angle $ABC = 110^\circ$. Find the distance AC. Give your answer correct to 3 significant figures.

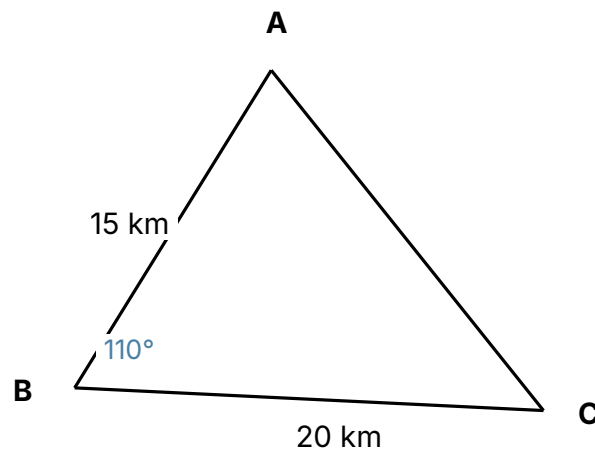


Diagram NOT accurately drawn

Answer _____

Q4

Grade 8

Edexcel style

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

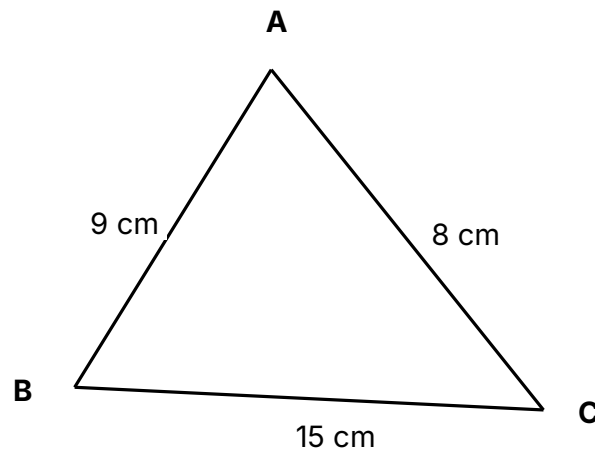


Diagram NOT accurately drawn

Answer _____

Q5

Grade 8

Edexcel style

Triangle ABC has sides $AB = 8\text{ cm}$, $BC = 6\text{ cm}$ and $CA = 11\text{ cm}$. Find the size of the largest angle in the triangle. Give your answer correct to 1 decimal place.

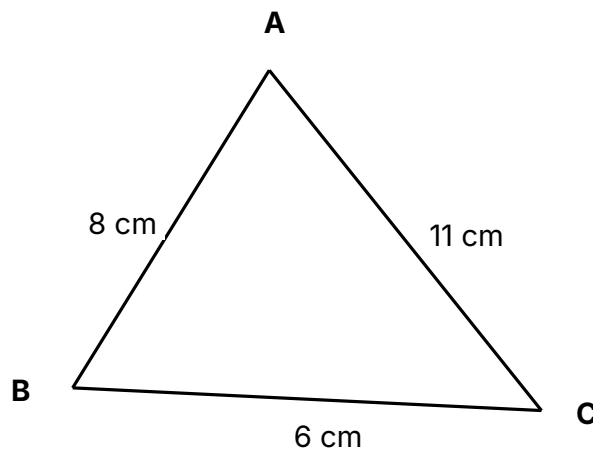


Diagram NOT accurately drawn

Answer _____

AQA-style questions**Q6**

Grade 6

AQA style

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

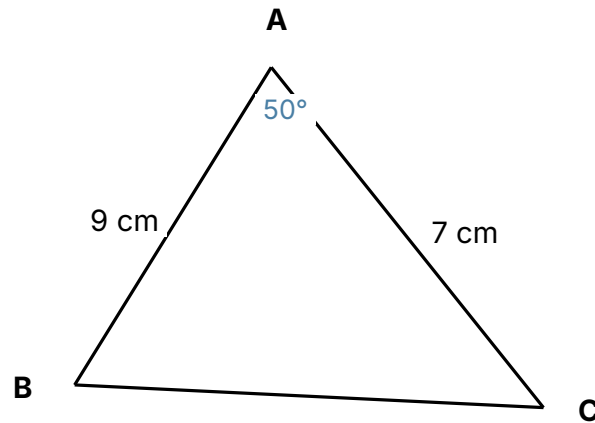


Diagram NOT accurately drawn

Answer _____

Q7

Grade 7

AQA style

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

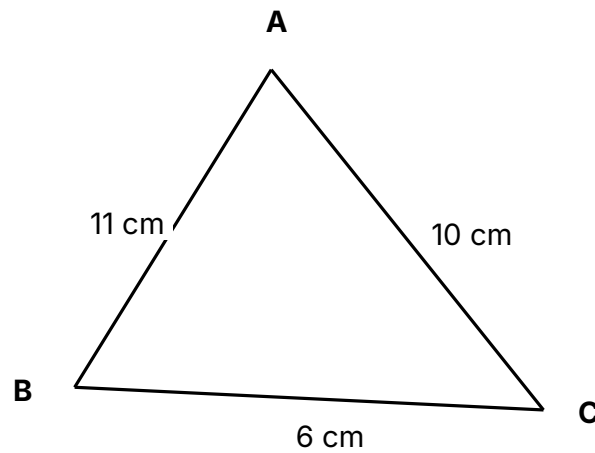


Diagram NOT accurately drawn

Answer _____

Q8

Grade 7

AQA style

A boat sails 12 km from port A to port B, then 18 km from B to port C. Angle $ABC = 95^\circ$. Find the distance AC. Give your answer correct to 3 significant figures.

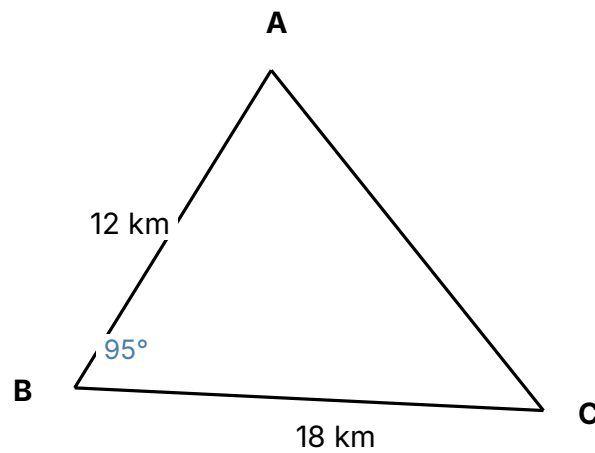


Diagram NOT accurately drawn

Answer _____

Q9

Grade 8

AQA style

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

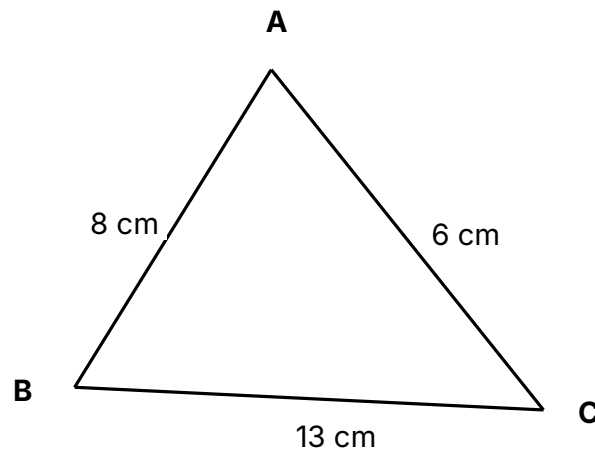


Diagram NOT accurately drawn

Answer _____

Q10

Grade 8

AQA style

Triangle ABC has sides $AB = 9\text{ cm}$, $BC = 7\text{ cm}$ and $CA = 13\text{ cm}$. Find the size of the largest angle in the triangle. Give your answer correct to 1 decimal place.

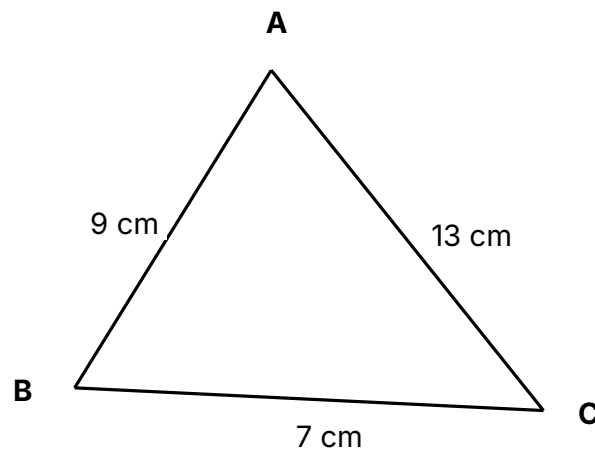


Diagram NOT accurately drawn

Answer _____

OCR-style questions

Q11

Grade 6

OCR style

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

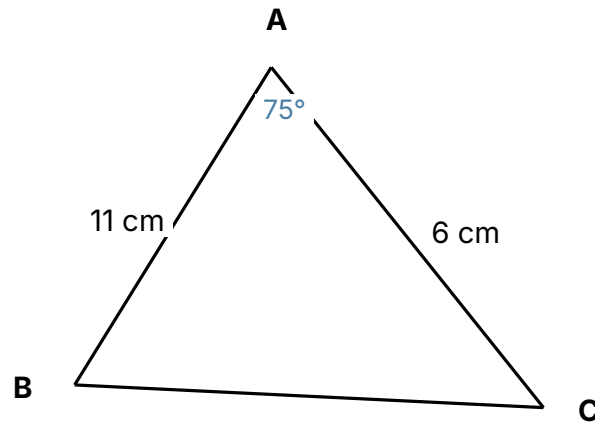


Diagram NOT accurately drawn

Answer _____

Q12

Grade 7

OCR style

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

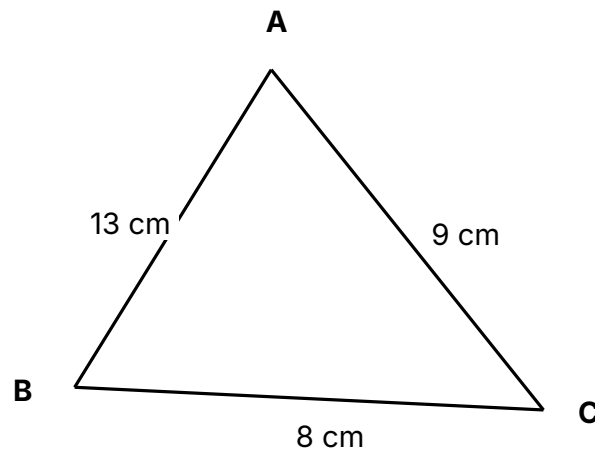


Diagram NOT accurately drawn

Answer _____

Q13

Grade 8

OCR style

A boat sails 25 km from port A to port B, then 17 km from B to port C. Angle $ABC = 105^\circ$. Find the distance AC. Give your answer correct to 3 significant figures.

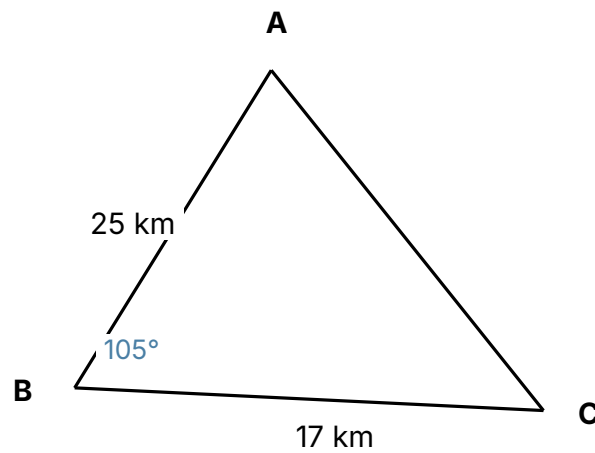


Diagram NOT accurately drawn

Answer _____

Q14

Grade 8

OCR style

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

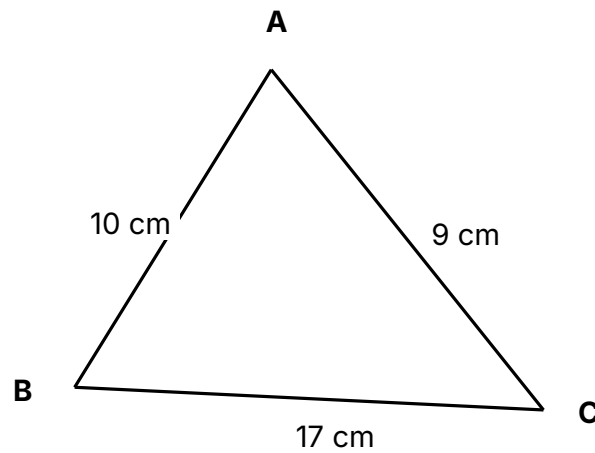


Diagram NOT accurately drawn

Answer _____

Q15

Grade 8

OCR style

Triangle ABC has sides $AB = 12\text{ cm}$, $BC = 5\text{ cm}$ and $CA = 14\text{ cm}$. Find the size of the largest angle in the triangle. Give your answer correct to 1 decimal place.

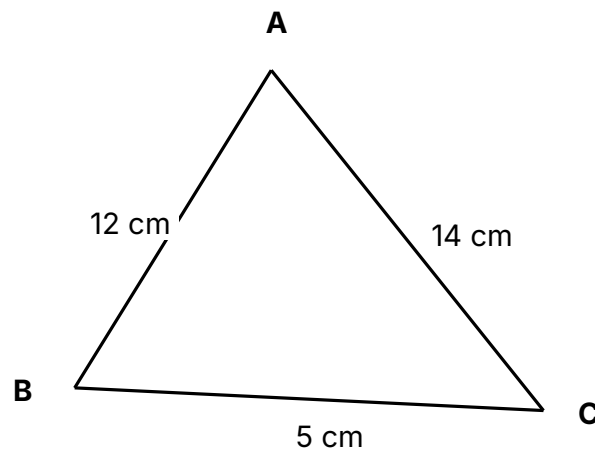


Diagram NOT accurately drawn

Answer _____

Teachably-style questions**Q16**

Grade 6

Teachably style

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

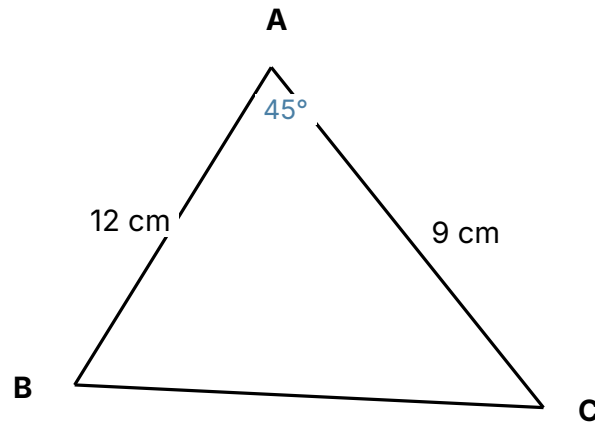


Diagram NOT accurately drawn

Answer _____

teachably**[3 marks]**

Q17

Grade 7

Teachably style

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

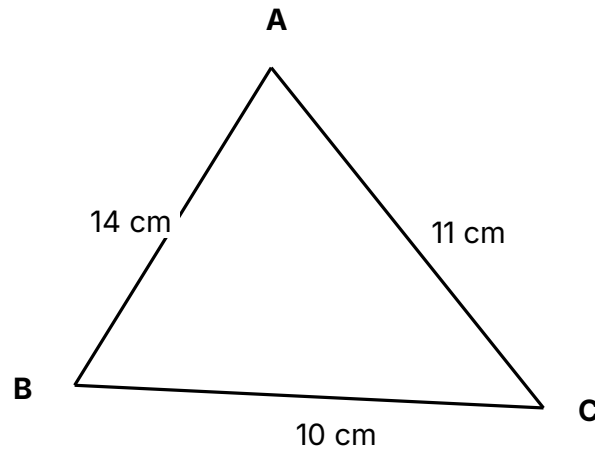


Diagram NOT accurately drawn

Answer _____

Q18

Grade 8

Teachably style

A boat sails 14 km from port A to port B, then 22 km from B to port C. Angle $ABC = 100^\circ$. Find the distance AC. Give your answer correct to 3 significant figures.

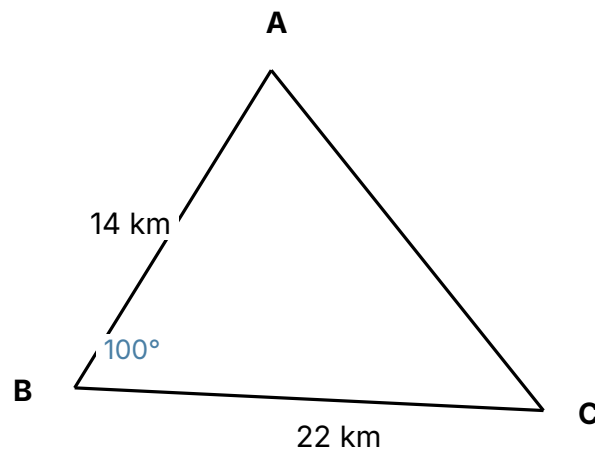


Diagram NOT accurately drawn

Answer _____

teachably

[3 marks]

Q19

Grade 8

Teachably style

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

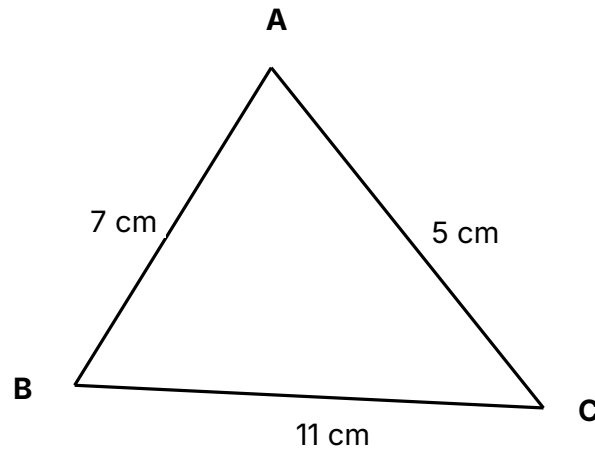


Diagram NOT accurately drawn

Answer _____

Q20

Grade 8

Teachably style

Triangle ABC has sides $AB = 10$ cm, $BC = 8$ cm and $CA = 15$ cm. Find the size of the largest angle in the triangle. Give your answer correct to 1 decimal place.

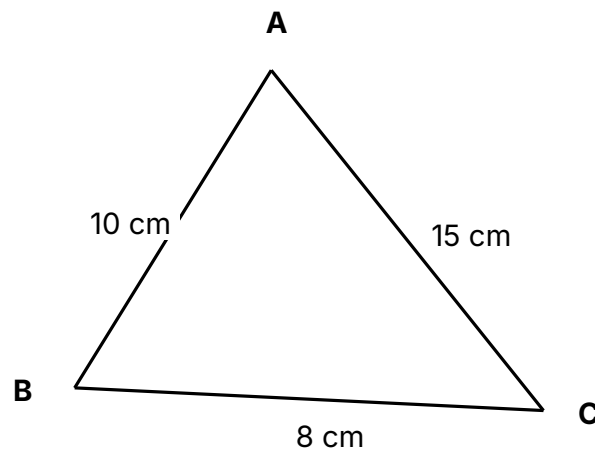


Diagram NOT accurately drawn

Answer _____

teachably

[3 marks]**END OF PAPER****Want help from an expert maths tutor?**

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