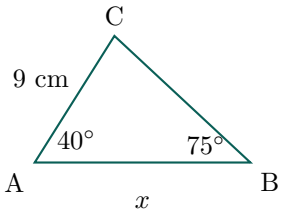
Sine and Cosine Rule

GCSE Mathematics • **Higher Tier** • Grades 7–8 • Non-calculator

Name: _____ Class: _____ Total: _____ / 74

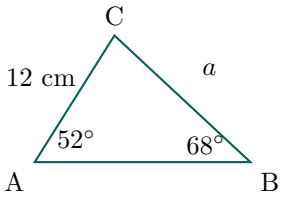
Show all your working. Marks are given for correct method as well as the final answer.

1. Work out the length x, to 1 d.p. **[3 marks]**



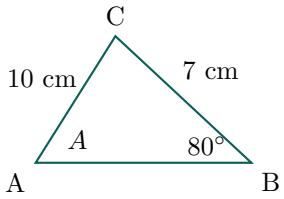
Answer: _____ **cm**

2. Work out the length a, to 1 d.p. **[3 marks]**



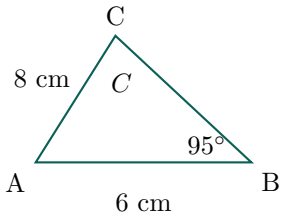
Answer: _____ **cm**

3. Work out the angle A, to 1 d.p. **[3 marks]**



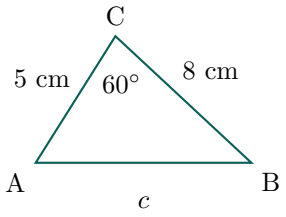
Answer: _____ °

4. Work out the angle C, to 1 d.p. **[3 marks]**



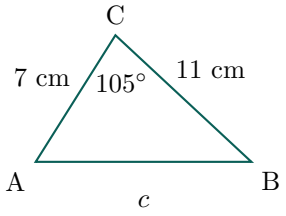
Answer: _____ °

5. Work out the length c, to 1 d.p. **[4 marks]**



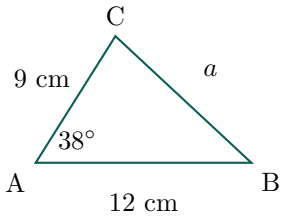
Answer: _____ **cm**

6. Work out the length c, to 1 d.p. **[4 marks]**



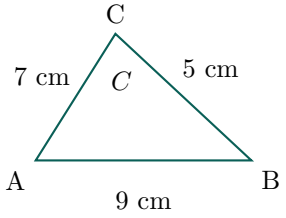
Answer: _____ **cm**

7. Work out the length a, to 1 d.p. **[4 marks]**



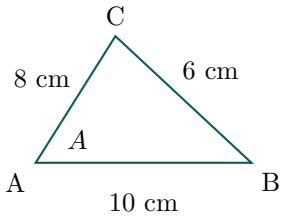
Answer: _____ **cm**

8. Work out the angle C, to 1 d.p. **[4 marks]**



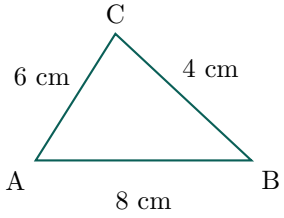
Answer: _____ °

9. Work out the angle A, to 1 d.p. **[4 marks]**



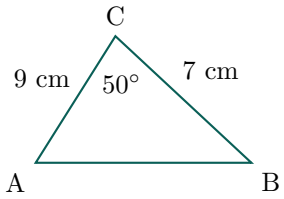
Answer: _____ °

10. Work out the largest angle in a triangle with sides 4 cm, 6 cm and 8 cm, to 1 d.p. **[4 marks]**



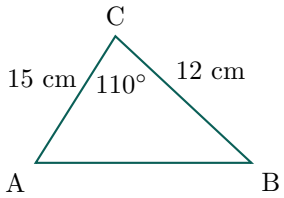
Answer: _____ °

11. Work out the area, to 1 d.p. **[3 marks]**



Answer: _____ **cm**^{2}

12. Work out the area, to 1 d.p. **[3 marks]**



Answer: _____ **cm**^{2}

13. A triangle has area 30 cm^2, two sides of 10 cm and 8 cm. Work out the angle between them, to 1 d.p. **[4 marks]**

Answer: _____ °

14. Write down which rule you would use when you know three sides and want an angle. **[1 mark]**

Answer: _____

15. Write down which rule you would use when you know two angles and one side. **[1 mark]**

Answer: _____

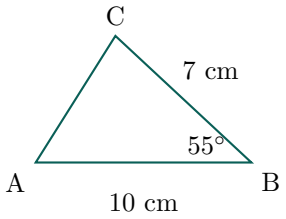
16. Explain why the sine rule can give two possible angles. **[2 marks]**

Answer: _____

17. $\sin A = 0.6$ and A is obtuse. Work out A, to 1 d.p. **[3 marks]**

Answer: _____ °

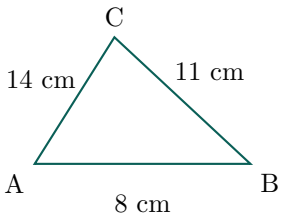
18. A triangle has $AB = 10$ cm, $BC = 7$ cm and angle $ABC = 55°$.



(a) Work out AC, to 1 d.p. **[4 marks]**

(b) Work out the area of the triangle, to 1 d.p. **[3 marks]**

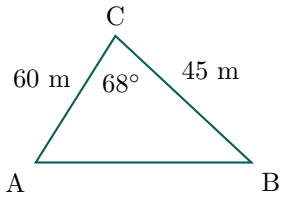
19. In triangle PQR, $PQ = 8$ cm, $QR = 11$ cm and $PR = 14$ cm.



(a) Work out the largest angle, to 1 d.p. **[4 marks]**

(b) Work out the area, to 1 d.p. **[3 marks]**

20. A field is a triangle with two sides 60 m and 45 m and an angle of 68° between them.



(a) Work out the area, to the nearest m^2. **[3 marks]**

(b) Work out the length of the third side, to 1 d.p. **[4 marks]**

Answer: _____

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