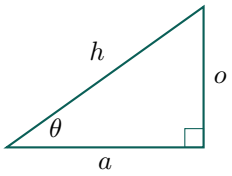
Trigonometry (SOHCAHTOA)

GCSE Mathematics • **Higher Tier** • Grades 6–7 • Non-calculator

Name: _____ Class: _____ Total: _____ / 68

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

1. The angle θ is marked. Name the side labelled h, and the side labelled o. **[2 marks]**

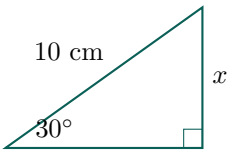


Answer: _____

2. Write down what SOH CAH TOA stands for. **[3 marks]**

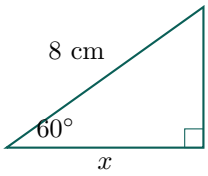
Answer: _____

3. Work out x. **[3 marks]**



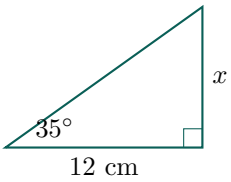
Answer: _____ **cm**

4. Work out x. **[3 marks]**



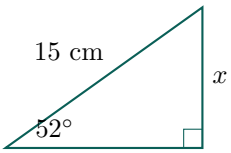
Answer: _____ **cm**

5. Work out x, to 1 decimal place. **[3 marks]**



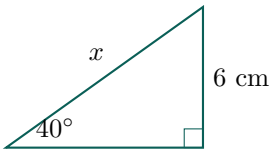
Answer: _____ **cm**

6. Work out x, to 1 decimal place. **[3 marks]**



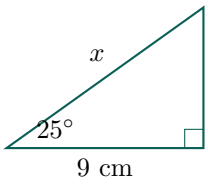
Answer: _____ **cm**

7. Work out x, to 1 decimal place. **[3 marks]**



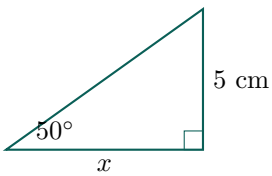
Answer: _____ **cm**

8. Work out x, to 1 decimal place. **[3 marks]**



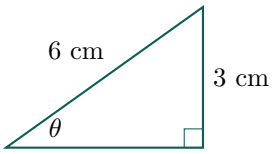
Answer: _____ **cm**

9. Work out x, to 1 decimal place. **[3 marks]**



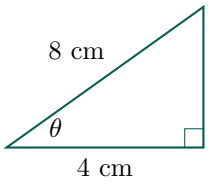
Answer: _____ **cm**

10. Work out the marked angle. **[3 marks]**



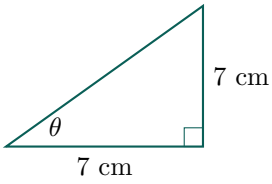
Answer: _____

11. Work out the marked angle. **[3 marks]**



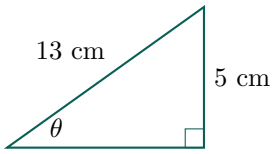
Answer: _____

12. Work out the marked angle. **[3 marks]**



Answer: _____

13. Work out the marked angle, to 1 decimal place. **[3 marks]**



Answer: _____

14. Write down the exact value of $\sin 30°$. **[1 mark]**

Answer: _____

15. Write down the exact value of $\cos 60°$. **[1 mark]**

Answer: _____

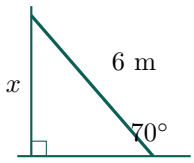
16. Write down the exact value of $\tan 45°$. **[1 mark]**

Answer: _____

17. Write down the exact value of $\sin 60°$. **[2 marks]**

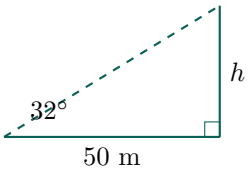
Answer: _____

18. A ladder leans against a wall as shown. Work out how far up the wall it reaches, to 1 decimal place. **[3 marks]**



Answer: _____ **m**

19. From a point 50 m from the base of a tower, the angle of elevation to the top is 32°.

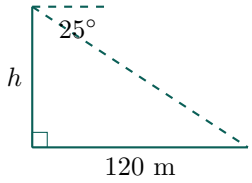


(a) Work out the height h, to 1 d.p. **[3 marks]**

(b) Explain which ratio you used and why. **[2 marks]**

Answer: _____

20. A boat is 120 m from the foot of a cliff. The angle of depression from the cliff top to the boat is 25°.

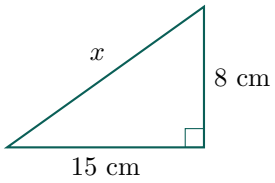


(a) Work out the height of the cliff, to 1 d.p. **[3 marks]**

(b) Explain why the angle of elevation from the boat is also 25°. **[2 marks]**

Answer: _____

21. A right-angled triangle has the two shorter sides shown.

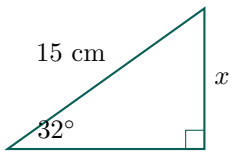


(a) Work out the hypotenuse x. **[3 marks]**

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

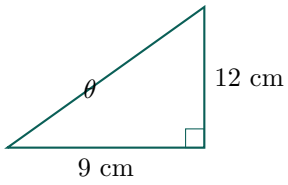
Answer: _____

22. Work out the length marked x. **[3 marks]**



Answer: _____ **cm**

23. Work out the size of the angle marked θ. **[3 marks]**



Answer: _____ °

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