MATHS STANDARD YEAR 11 - MODULE 2 - LESSON 14

Right-Angled Trigonometry: Finding Unknown Sides

Use this worksheet after reading the lesson to practise the key ideas and prove you can meet the success criteria.

Name _____

Date _____

Class _____

1. Key Ideas

Label the triangle, choose the correct ratio, then solve — three consistent steps every time. When the unknown is in the denominator, multiply across. When it is in the numerator, the answer falls straight out.

- SOHCAHTOA — the three ratios and when to use each
- Why labelling the triangle before choosing a ratio prevents errors

2. Success Criteria

By the end, you should be able to:

- SOHCAHTOA — the three ratios and when to use each
- H is always opposite the right angle; O and A depend on which angle is marked
- When unknown is in the numerator: multiply; when in denominator: multiply across

3. Key Terms

Formula
A rule showing the relationship between variables using symbols.

Substitution
Replacing variables with their known values in an equation.

Unit Conversion
Changing a measurement from one unit to another.

Capacity
The amount of liquid a container can hold, measured in litres or millilitres.

Perimeter
The total distance around the outside of a shape.

Area
The amount of space inside a two-dimensional shape.

4. Activity: Build the Lesson Map

Use the lesson to complete the table. Keep answers brief but specific.

Prompt	Your answer
Main concept	
Important example	
Common mistake to avoid	
How this links to the next lesson	

5. Short Answer Questions

1. Explain this lesson goal in your own words: "SOHCAHTOA — the three ratios and when to use each". Use one specific example from the lesson.

BAND 3 2 MARKS

2. Apply this idea to a new example: "H is always opposite the right angle; O and A depend on which angle is marked". Show your reasoning clearly.

BAND 4 3 MARKS

3. Analyse why this idea matters for understanding Right-Angled Trigonometry: Finding Unknown Sides: "When unknown is in the numerator: multiply; when in denominator: multiply across".

BAND 5 4 MARKS

6. Extend: Apply the Idea

BAND 5/6 5 MARKS

A student gives a memorised answer about Right-Angled Trigonometry: Finding Unknown Sides but does not use evidence or reasoning.

Improve the answer by writing a stronger response that uses accurate terminology, a relevant example and a clear explanation.

7. Multiple Choice

1. What is the best first step when answering a question about Right-Angled Trigonometry: Finding Unknown Sides?

- [ ] A. Identify the key concept being tested
- [ ] B. Write every fact from memory
- [ ] C. Ignore the command word
- [ ] D. Skip examples and evidence

2. Which answer would show stronger understanding of Right-Angled Trigonometry: Finding Unknown Sides?

- [ ] A. An answer with accurate terms and reasoning
- [ ] B. A copied definition only
- [ ] C. A single-word response
- [ ] D. An answer with no example

3. What should you do if a question asks you to explain?

- [ ] A. Link the idea to a reason or cause
- [ ] B. List unrelated facts
- [ ] C. Only draw a diagram
- [ ] D. Write the shortest possible answer

8. Success Criteria Proof

Finish with evidence that you can do each success criterion.

SUCCESS CRITERION 1

Prove that you can: SOHCAHTOA — the three ratios and when to use each

BAND 3 2 MARKS

SUCCESS CRITERION 2

Prove that you can: H is always opposite the right angle; O and A depend on which angle is marked

BAND 4 3 MARKS

SUCCESS CRITERION 3

Prove that you can: When unknown is in the numerator: multiply; when in denominator: multiply across

BAND 5 4 MARKS

One thing I still need help with: