

Angles of Elevation and Depression

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

Draw the horizontal reference line first — always. The angle opens between that horizontal and your line of sight, never from the vertical. Get the diagram right and the trigonometry is straightforward.

- Angle of elevation: measured upward from horizontal
- Why the horizontal reference line must appear in every diagram

2. Success Criteria

By the end, you should be able to:

- Angle of elevation: measured upward from horizontal
- Angle of depression: measured downward from horizontal
- Both angles are always referenced from the horizontal

3. Key Terms

You

standing on top of a cliff looking down at a boat

Your friend

in the boat looking up at you

Both angles

always referenced from the horizontal

elevation and depression angles

equal (alternate angles)

Area and perimeter

calculated using the same formula

Converting to consistent units

a common source of errors in assessment tasks

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: "Angle of elevation: measured upward from horizontal". Use one specific example from the lesson.

BAND 3 **2 MARKS**

2. Apply this idea to a new example: "Angle of depression: measured downward from horizontal". Show your reasoning clearly.

BAND 4 **3 MARKS**

3. Analyse why this idea matters for understanding Angles of Elevation and Depression: "Both angles are always referenced from the horizontal".

BAND 5 **4 MARKS**

6. Extend: Apply the Idea

BAND 5/6 **5 MARKS**

A student gives a memorised answer about Angles of Elevation and Depression 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 Angles of Elevation and Depression?

- 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 Angles of Elevation and Depression?

- 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: Angle of elevation: measured upward from horizontal

BAND 3 **2 MARKS**

SUCCESS CRITERION 2

Prove that you can: Angle of depression: measured downward from horizontal

BAND 4 **3 MARKS**

SUCCESS CRITERION 3

Prove that you can: Both angles are always referenced from the horizontal

BAND 5 **4 MARKS**

One thing I still need help with:
