Upside-Down Boat Drawing: Orientation Practice with Hull and Keel Cues

Original task 1 / independent drawing and calculation

Task 1

In a 10 cm by 7 cm frame, draw an inverted boat with an upward-opening hull arc peaking 2 cm above the midline and a straight keel line 1 cm above the peak. Add a reflection cue at the top edge. Describe your check.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 2 / independent drawing and calculation

Task 2

A student draws a hull arc opening downward and a keel line above it. Identify the orientation error and state the fix.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.



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Original task 3 / independent drawing and calculation

Task 3

Draw an inverted boat in a blank frame using a gently curved keel instead of a straight one. Keep the keel above the hull and add a reflection cue. Explain why this is valid.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 4 / independent drawing and calculation

Task 4

Your reference frame is 12 cm wide by 8 cm tall, with a chosen 1 cm gap from hull apex to keel. A new frame is 14 cm wide by 9 cm tall. Using the stated height-based proportion, calculate the new gap and describe the orientation check.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

Full drawing sheet / reusable blank workspace

Reusable full drawing sheet for Tasks 1 to 4. Print another copy when needed. Keep all original task measurements; if a task specifies larger paper, use that paper size.