Little Boat Drawing: Hull, Oars, and Seat

Original tasks 1, 2, 3 / complete keys

Task 1

A hull top edge is 8 cm long. Each oar extends 2 cm past the hull on its side. What is the total width from the left oar tip to the right oar tip?

Answer: 12 cm.

Reason: Total width = hull width + left overhang + right overhang = 8 + 2 + 2 = 12 cm.

Check: Measure the hull top edge and each overhang with a ruler; add the three values and compare to 12 cm.

Task 2

A seat is drawn 5 cm long inside a hull whose top edge is 9 cm long. The seat is centered. How much gap is there on each side between the seat end and the hull side?

Answer: 2 cm on each side.

Reason: The total gap is 9 - 5 = 4 cm. Since the seat is centered, each side gap is 4 ÷ 2 = 2 cm.

Check: Measure the gap on the left and the gap on the right; both should be 2 cm.

Task 3

A drawing area is 10 cm wide. The hull is 7 cm wide. Each oar may extend past the hull by the same amount. What is the largest overhang per oar that keeps the total width within 10 cm?

Answer: 1.5 cm per oar.

Reason: Total width = 7 + 2 × overhang. Set 7 + 2 × overhang = 10, so 2 × overhang = 3, and overhang = 1.5 cm.

Check: Measure the total width; it should be 10 cm or less. Check that each overhang is 1.5 cm.

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Original tasks 4 / complete keys

Task 4

A hull curve dips 1 cm below the top edge at its lowest point. The top edge is 4 cm above the baseline. How far above the baseline is the lowest point of the hull curve?

Answer: 3 cm above the baseline.

Reason: The top edge is 4 cm above the baseline. The lowest point is 1 cm below the top edge, so 4 - 1 = 3 cm above the baseline.

Check: Measure from the baseline to the top edge, then from the top edge down to the lowest point; subtract the second measurement from the first.

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Source rubric / reflection

- [ ] Hull has a straight top edge and a shallow curve with rounded ends.
- [ ] Seat is a short horizontal line inside the hull, centered and parallel to the top edge.
- [ ] Exactly two oars are present, one on each side, each starting inside the hull and extending outward.
- [ ] Oars are straight lines and do not cross each other inside the hull.
- [ ] No extra parts such as sails, flags, or people are added.
- [ ] Drawing fits the chosen area; any numerical values are labeled as hypothetical examples.

Reflection: What did you check, what did you change, and what will you try next?