Upside-Down Elephant Drawing: Orientation and Proportion Practice

Original tasks 1, 2, 3 / complete keys

Task 1

A rotated reference shows an elephant with body length 8 cm and leg length 2 cm. You draw a copy with body length 12 cm. What leg length keeps the same ratio?

Answer: 3 cm.

Reason: The reference ratio is 8:2, which simplifies to 4:1. For a body length of 12 cm, divide by 4 to get 3 cm.

Check: Multiply your leg length by 4 and confirm it equals the body length: 3 times 4 equals 12.

Task 2

In a rotated drawing, the trunk tip is 2 cm from the head edge and the feet are 1 cm from the feet edge. Which edge is the head edge if the box is 10 cm tall?

Answer: The bottom edge.

Reason: After 180-degree rotation, the head and trunk move to the opposite side from the feet. The feet are near the top edge, so the head edge is the bottom edge.

Check: The feet are 1 cm from the top edge, so the top edge is the feet edge. After 180-degree rotation the head edge is opposite the feet edge, so the bottom edge is the head edge. Confirm the trunk tip is 2 cm from the bottom edge.

Task 3

You measure an ear width of 3 cm and a head width of 7 cm on the reference. Your copy has a head width of 14 cm. What ear width keeps the same proportion?

Answer: 6 cm.

Reason: The reference ear-to-head ratio is 3:7. Your head width is twice the reference head width, so double the ear width: 3 times 2 equals 6 cm.

Check: Divide your ear width by your head width: 6 divided by 14 simplifies to 3:7, matching the reference.

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Original tasks 4 / complete keys

Task 4

A tracing box is 14 cm wide and 10 cm tall. You place the body center at the box center. The reference body is 8 cm long and 5 cm tall. If you keep the same size, how far is the body edge from the left box edge?

Answer: 3 cm.

Reason: The box center is 7 cm from the left edge. Half the body length is 4 cm. Subtract: 7 minus 4 equals 3 cm.

Check: Add the distance and half the body length: 3 plus 4 equals 7, the box center.

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Source rubric / reflection

- [ ] Orientation: feet point to the feet edge and trunk curls toward the head edge.
- [ ] Proportion: the measured body-to-leg ratio is within about 10% of the reference body-to-leg ratio.
- [ ] Feature placement: ear and tail are on the correct sides after rotation.
- [ ] Measurement record: key lengths are written beside the drawing in centimeters.
- [ ] Valid alternatives: ear shape or trunk curve may differ if orientation and proportion checks pass.

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