Draw a Mule Deer Skull: Antler Base, Nasal Taper, Orbit, and Jaw

Original tasks 1, 2, 3 / complete keys

Task 1

A practice box is 16 cm wide and 10 cm tall. The pedicle base is marked 5 cm from the back edge. The orbit center is marked 9 cm from the back edge and 1 cm above the midline. Is the orbit forward of the pedicle, and by how much?

Answer: Yes, the orbit is forward of the pedicle by 4 cm.

Reason: Subtract the pedicle base position from the orbit position: 9 cm minus 5 cm equals 4 cm. The orbit is farther from the back edge, so it is forward.

Check: Measure both marks from the same back edge and confirm the difference is 4 cm.

Task 2

In a 20 cm wide box, the nasal tip is 3 cm from the front edge and the orbit center is 12 cm from the back edge. The box is 20 cm wide. How far is the orbit center from the nasal tip along the horizontal midline?

Answer: The orbit center is 5 cm from the nasal tip.

Reason: The nasal tip is 3 cm from the front, so it is 17 cm from the back edge. Subtract the orbit position: 17 cm minus 12 cm equals 5 cm.

Check: Mark 12 cm and 17 cm from the back edge on the midline and measure the gap; it should be 5 cm.

Task 3

A jaw line starts 3 cm below the midline at the back and ends 1.5 cm below the midline at the front. What is the vertical drop from the back to the front?

Answer: The vertical drop is 1.5 cm.

Reason: Subtract the front depth from the back depth: 3 cm minus 1.5 cm equals 1.5 cm. The jaw rises toward the front by that amount.

Check: Measure the perpendicular distance from the midline to each jaw point and subtract the smaller from the larger.

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Original tasks 4 / complete keys

Task 4

A pedicle stub is 2 cm tall and 1.5 cm wide. The orbit circle is 3 cm across. Using the x-height convention, suppose one x-height on your drawing is 0.5 cm. How many x-heights tall is the pedicle, and how many x-heights across is the orbit?

Answer: The pedicle is 4 x-heights tall, and the orbit is 6 x-heights across.

Reason: Divide each measurement by 0.5 cm: 2 divided by 0.5 equals 4; 3 divided by 0.5 equals 6. Letter styles vary, so use your own clear midline to define the x-height.

Check: Stack four x-height marks beside the pedicle and six across the orbit; adjust if your chosen letter style gives a different but consistent unit.

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Source rubric / reflection

- [ ] Pedicle is drawn as a short bony stub, not a full antler.
- [ ] Orbit is forward of the pedicle and does not touch the nasal taper.
- [ ] Nasal taper narrows gradually and the tip is rounded.
- [ ] Mandible stays below the orbit and connects visually to the skull.
- [ ] Construction lines are light and erased after final outline.
- [ ] Proportions are checked with measured marks or the x-height convention; valid alternative letter styles are accepted.

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