Draw a Realistic Snake: Scale Rows, Fangs, and Head Construction

Original tasks 1, 2, 3 / complete keys

Task 1

A 12 cm body drawing uses dorsal row spacing of 2 mm. How many dorsal row intervals fit along the centerline, and what offset should lateral rows use?

Answer: 6 intervals; lateral offset 1 mm.

Reason: 12 cm divided by 2 mm equals 6 intervals. Half of 2 mm is 1 mm, so lateral rows offset by 1 mm.

Check: Multiply intervals by spacing to recover 12 cm, and confirm the offset is half the spacing.

Task 2

On an 8 cm head, the front fang is 5 mm and the rear fang is 4 mm. Are the fangs proportional if the head length is treated as 80 mm? State the ratio of front fang to head length.

Answer: Yes, they are proportional; front fang ratio is 5:80 or 1:16.

Reason: Convert 8 cm to 80 mm. The front fang is 5 mm, giving 5/80, which simplifies to 1/16. The rear fang is 4/80 or 1/20, slightly shorter as intended.

Check: Divide fang length by head length in the same units and confirm the front fang is longer but both remain small fractions.

Task 3

A head is drawn with the eye placed at the jaw line and the fangs on the lower jaw. Identify two structural errors and state the fixes.

Answer: Error 1: eye at the jaw line; fix by moving it above the jaw line. Error 2: fangs on the lower jaw; fix by attaching them to the upper jaw near the snout tip.

Reason: The eye should sit above the jaw line on the cranial oval, and fangs belong on the upper jaw forward of the eye.

Check: Trace the jaw line and confirm the eye center is above it; trace each fang base to the upper jaw edge.

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Original tasks 4 / complete keys

Task 4

A body drawing has dorsal rows at 3 mm spacing but lateral rows at 5 mm spacing. State whether the rows are consistent and give a corrected lateral spacing using the half-offset rule.

Answer: They are inconsistent. Corrected lateral spacing is 3 mm with a 1.5 mm offset.

Reason: Row spacing should match across bands for a coherent scale flow. The half-offset rule uses half the dorsal spacing, so 1.5 mm.

Check: Compare spacing values directly and verify the offset equals half the chosen spacing.

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Source rubric / reflection

- [ ] Head is built from three overlapping ovals with a clear snout and jaw.
- [ ] Eye sits above the jaw line and roughly one-third back from the snout tip.
- [ ] Two fangs attach to the upper jaw near the snout tip and point down and slightly back.
- [ ] Scale rows follow body curves, stagger by half a scale, and narrow gradually toward the tail.
- [ ] Body centerline meets the head center and the neck tapers smoothly.
- [ ] Valid alternatives in head shape, scale size, and shading are accepted if structural checks pass.

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