Realistic Alligator Drawing: Snout, Scutes, and Body Proportions

Original tasks 1, 2, 3 / complete keys

Task 1

On a 24 cm baseline, divide into eight equal units. Mark the snout tip, eye, shoulder, hip, and tail tip. State each position in cm.

Answer: Units are 3 cm each. Snout tip 0 cm, eye 6 cm, shoulder 9 cm, hip 18 cm, tail tip 24 cm.

Reason: 24 divided by 8 equals 3 cm per unit. Eye is at unit 2, shoulder at unit 3, hip at unit 6, tail tip at unit 8.

Check: Add the unit lengths: 3+3+3+3+3+3+3+3=24 cm. Confirm each mark matches the unit count.

Task 2

A student draws a snout 2 cm wide at the tip on a 16 cm baseline with 2 cm units. Is the snout broad enough by the convention? Explain.

Answer: Yes. One unit is 2 cm, and the convention says snout width at the tip is about one unit, so 2 cm is correct.

Reason: 16 cm divided by 8 equals 2 cm per unit. The snout tip width should be about one unit, which is 2 cm.

Check: Compare the drawn width to the unit length. If it is about equal, it passes.

Task 3

Describe how to place the visible dorsal scutes along a back from 6 cm to 16 cm in side profile, using the convention of one scute per half unit, with a 2 cm unit. How many scutes are in the fully visible near-side row, and how should the far-side row be shown?

Answer: Ten scutes in the fully visible near-side row, centered at 6.5, 7.5, 8.5, 9.5, 10.5, 11.5, 12.5, 13.5, 14.5, and 15.5 cm. The far-side row is mostly hidden; show only its raised tops peeking slightly above the back line, offset from the near row. Smaller scutes go between the visible scutes, about half the size.

Reason: One unit is 2 cm, so half a unit is 1 cm. The distance is 16 minus 6 equals 10 cm. At 1 cm spacing with one scute centered in each interval, that is 10 intervals and therefore 10 scutes in the near-side row. In side profile the far-side row is largely hidden, so only its raised tops are drawn.

Check: Count the near-side scutes: 10. Measure spacing: about 1 cm between centers, which is half a unit. Check that the far-side row appears only as raised tops above the back line, not as a full second row.

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Original tasks 4 / complete keys

Task 4

A drawing has body height 4 cm at the shoulder on a 16 cm baseline with 2 cm units. Does it match the convention of 1.5 units? What height should it be?

Answer: No. It should be 3 cm, because 1.5 units times 2 cm equals 3 cm. The drawing is 1 cm too tall.

Reason: One unit is 2 cm. The convention says shoulder height is about 1.5 units, so 1.5 times 2 equals 3 cm.

Check: Multiply unit length by 1.5. Compare to the drawn height. If different, adjust.

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Source rubric / reflection

- [ ] Snout is broad and rounded, not narrow or V-shaped.
- [ ] Mouth line is straight and horizontal; upper jaw slightly overlaps lower.
- [ ] Eye is placed high on the head, about one unit above the jaw line.
- [ ] Body is low and long, about 1.5 units tall at the shoulder.
- [ ] The near-side main row of dorsal scutes is fully visible, with only the raised tops of the far-side row peeking above the back line, and smaller scutes between.
- [ ] Tail tapers to a point and is about two units long.
- [ ] Legs are short, one to one and a half units, with three visible toes.
- [ ] Proportions match the eight-unit convention or a clearly stated alternative.

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