Realistic Fish Drawing: Proportion and Shading Guide

Original tasks 1, 2, 3 / complete keys

Task 1

A fish drawing has body length 15 cm. Using the hypothetical 2:5 depth ratio, calculate the maximum depth and the distance from the snout to the deepest point.

Answer: Maximum depth is 6 cm. The deepest point is about 5 cm from the snout.

Reason: Depth is two-fifths of 15 cm: 15 times 2 divided by 5 equals 6 cm. One-third of 15 cm is 5 cm.

Check: Measure the depth at the mark; it should be 6 cm. Measure from the snout to the mark; it should be about 5 cm. Accept within 0.5 cm.

Task 2

A fish has head length 8 cm. Using the hypothetical eye-diameter check of one-eighth of head length, calculate the suggested eye diameter.

Answer: Suggested eye diameter is 1 cm.

Reason: One-eighth of 8 cm is 8 divided by 8, which equals 1 cm. This is a teaching check, not a universal standard.

Check: Measure the drawn eye across its widest point. It should be about 1 cm. Accept between 0.8 cm and 1.2 cm if the eye still looks proportionate.

Task 3

You have a five-value strip labeled 1 lightest to 5 darkest. A fish is lit from the upper left. List which values you would use for the upper flank, mid-body shadow, lower flank, and a small shadow behind a fin.

Answer: Upper flank: value 1 or 2. Mid-body shadow: value 3. Lower flank: value 4. Small shadow behind a fin: value 5.

Reason: The lit upper flank gets the lightest values. The mid-body transitions to mid gray. The lower flank is darker. The darkest value is reserved for small deep shadows.

Check: Squint at the drawing. The upper flank should appear lightest, the lower flank darker, and the darkest marks should be small and localized. If value 5 covers a large area, lighten it.

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Original tasks 4 / complete keys

Task 4

A dorsal fin is drawn starting above the deepest point and ending before the tail base. The body length is 20 cm. The dorsal fin starts 7 cm from the snout and ends 16 cm from the snout. Calculate the dorsal fin length along the body and state whether it stays before the tail base at 20 cm.

Answer: Dorsal fin length along the body is 9 cm. It ends at 16 cm from the snout, which is before the tail base at 20 cm.

Reason: Subtract the start distance from the end distance: 16 minus 7 equals 9 cm. Since 16 cm is less than 20 cm, the fin ends before the tail base.

Check: Measure the dorsal fin base along the body outline. It should be about 9 cm. Confirm the end mark is at least 4 cm before the tail base. Accept within 0.5 cm.

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Source rubric / reflection

- [ ] Body length and maximum depth follow a stated ratio within 0.5 cm.
- [ ] Deepest point is marked near one-third length from the snout.
- [ ] Dorsal, anal, pelvic, and pectoral fins are placed using body landmarks.
- [ ] Five-value shading strip is present and labeled 1 to 5.
- [ ] Shading uses at least three values and reserves value 5 for small shadows.
- [ ] Scales are short overlapping marks, not full circles.
- [ ] Eye size is checked against head length and is not oversized.
- [ ] Valid alternative fin shapes and ratios are accepted if consistently applied.

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