Abstract Profile Face in Contour Line: Simplify Curves with Confidence

Original tasks 1, 2, 3 / complete keys

Task 1

Draw an abstract profile contour with a total height of 10 cm. Use hypothetical segments: forehead 2.5 cm, brow-to-nose 1.5 cm, nose-to-chin 3.5 cm, jaw return 2.5 cm. Apply the two-bend limit.

Answer: A contour line 10 cm tall with anchors at 2.5 cm, 4 cm, 7.5 cm, and 10 cm. Each feature segment uses one arc or one arc plus a short step. Internal features are omitted.

Reason: The segment lengths sum to 10 cm: 2.5 + 1.5 + 3.5 + 2.5 = 10. The two-bend limit keeps the line abstract while preserving the profile.

Check: Measure total height and each segment. Confirm the sum is 10 cm within 0.5 cm. Count bends per segment; each should be two or fewer.

Task 2

Simplify a nose segment that has four small bumps into an abstract contour segment with at most two bends. Describe the new segment and how you would check it.

Answer: Replace the four bumps with one bridge arc and one tip curve. The new segment has two bends. Check by counting direction changes and confirming the profile still reads as a nose edge.

Reason: The two-bend limit reduces visual noise. One arc for the bridge and one curve for the tip preserve the profile while simplifying the shape.

Check: Count bends in the redrawn segment. Confirm it is two or fewer. Compare the simplified line to the original: the nose edge should still be recognizable.

Task 3

A contour has segments of 3 cm, 2 cm, 4 cm, and 2 cm. The total height is 12 cm. Does the measurement check pass? Show the arithmetic and state any adjustment.

Answer: The sum is 3 + 2 + 4 + 2 = 11 cm. The total is 12 cm, so the difference is 1 cm, which exceeds 0.5 cm. Adjust one segment, for example increase the jaw return from 2 cm to 3 cm, making the sum 12 cm.

Reason: The check requires the segment sum to equal the total within 0.5 cm. A 1 cm difference fails, so one segment must change.

Check: Add the segment values. Compare to total height. If the difference is greater than 0.5 cm, adjust one segment and re-add.

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Original tasks 4 / complete keys

Task 4

Draw a broken contour using two strokes: one from forehead to nose tip, one from nose tip to chin. Keep each feature to at most two bends and total height 14 cm. Use hypothetical segments: forehead 3 cm, brow-to-nose 2 cm, nose-to-chin 5 cm, jaw return 4 cm.

Answer: A two-stroke contour with a break at the nose tip. Anchors at 3 cm, 5 cm, 10 cm, and 14 cm. Each feature segment has two or fewer bends. The break is intentional and does not add internal features.

Reason: A broken contour is a valid alternative if the profile remains readable. The segment lengths sum to 14 cm: 3 + 2 + 5 + 4 = 14.

Check: Measure total height and segments; confirm the sum is 14 cm within 0.5 cm. Count bends per segment. Confirm the break occurs at the nose tip and the profile still reads as a face edge.

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Source rubric / reflection

- [ ] Profile readability: the contour reads as a face edge from forehead to chin.
- [ ] Simplification: each feature segment has at most two bends.
- [ ] Line quality: line weight is consistent or intentionally varied.
- [ ] Abstraction: internal features do not dominate the outline.
- [ ] Measurement check: segment lengths sum to total height within 0.5 cm.
- [ ] Valid alternatives: sharper or softer features are accepted if the profile remains readable.

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