Contour Line Chameleon: Observation Drawing Guide

Original tasks 1, 2, 3 / complete keys

Task 1

A reference chameleon body length is 150 mm and its casque height above the back is 20 mm. You draw at a scale ratio of 0.6. What casque height should you aim for in your drawing?

Answer: 12 mm.

Reason: Multiply the reference casque height by the scale ratio: 20 mm times 0.6 equals 12 mm. Keep units in millimetres.

Check: Measure your drawn casque height with a ruler and compare it to 12 mm; a small freehand difference is acceptable.

Task 2

On a reference, the distance from eye turret centre to tail base is 90 mm. Your drawing uses a scale ratio of 0.75. What distance should you check for on your drawing?

Answer: 67.5 mm.

Reason: Multiply 90 mm by 0.75 to get 67.5 mm. This is the scaled distance you should compare with your drawing.

Check: Measure from your drawn eye turret centre to tail base and compare to 67.5 mm; note any large difference.

Task 3

A reference tail spiral has 2.5 visible turns and a width of 40 mm. Your panel allows a tail spiral width of 28 mm. How many turns should you aim to show, and what is the scale ratio?

Answer: Aim for about 2.5 turns; the scale ratio is 0.7.

Reason: The scale ratio is 28 divided by 40, or 0.7. The number of turns is a shape feature, so keep it close to the reference rather than scaling it numerically.

Check: Count the turns on your drawing and compare to 2.5; measure the spiral width and compare to 28 mm.

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Original tasks 4 / complete keys

Task 4

You measure three distances on your drawing: 50 mm, 35 mm, and 22 mm. Your scale ratio is 0.5. What are the corresponding reference distances?

Answer: 100 mm, 70 mm, and 44 mm.

Reason: Divide each drawing distance by the scale ratio: 50 divided by 0.5 equals 100; 35 divided by 0.5 equals 70; 22 divided by 0.5 equals 44. All in millimetres.

Check: Measure the same three distances on the reference and compare to 100 mm, 70 mm, and 44 mm; large differences indicate proportion errors.

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Source rubric / reflection

- [ ] Outer contour follows the reference edge with recognizable casque, back, belly, and tail curl.
- [ ] Eye turret is drawn as a closed contour that overlaps the head edge at a marked point.
- [ ] Tail spiral follows the visible outer edge and has a comparable number of turns to the reference.
- [ ] Three key distances are measured and compared using a consistent scale ratio.
- [ ] Interior lines are limited to major forms; no scale patterns or shading are added.
- [ ] Labels and notes are legible; valid alternative handwriting styles are accepted.

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