Full-Body Dragon Drawing: Head-to-Tail Proportion Guide

Original tasks 1, 2, 3 / complete keys

Task 1

Set H = 2 cm and L = 6H. List the lengths of head, neck, torso, hips, and tail in centimetres, assuming head 1H, neck 1H, torso 2H, hips 1H, and the remainder as tail.

Answer: H = 2 cm, L = 12 cm. Head 2 cm, neck 2 cm, torso 4 cm, hips 2 cm, tail 2 cm. Sum = 12 cm.

Reason: Each segment is converted by multiplying its H multiple by 2 cm. The tail is L minus the sum of the other four segments: 12 minus 10 equals 2 cm.

Check: Add the five segment lengths and confirm the total equals 12 cm. Confirm the tail is positive and the sum matches L.

Task 2

A dragon uses H = 4 cm and L = 8H. Find the front-leg attachment at 2.25H and the rear-leg attachment at 4.5H in centimetres. State which box each falls inside.

Answer: H = 4 cm, L = 32 cm. Front attachment = 9 cm, inside the torso box from 8 cm to 16 cm. Rear attachment = 18 cm, inside the hips box from 16 cm to 20 cm.

Reason: Multiply 2.25 by 4 to get 9 cm and 4.5 by 4 to get 18 cm. Compare each value with the box ranges expressed in centimetres.

Check: Verify 8 is less than 9 and 9 is less than 16; verify 16 is less than 18 and 18 is less than 20. Also confirm 8H equals 32 cm.

Task 3

A student draws a torso box from 2H to 4H but places the front legs at 1.5H. Using H = 3 cm, compute the attachment position and explain the correction.

Answer: Attachment at 1.5H = 4.5 cm, which lies in the neck box from 3 cm to 6 cm. The correction is to move the attachment to about 2.25H = 6.75 cm, inside the torso box from 6 cm to 12 cm.

Reason: The attachment value is converted to centimetres and compared with box ranges. The neck box ends at 2H = 6 cm, so 4.5 cm is too far forward.

Check: Confirm 4.5 is less than 6 and therefore outside the torso box. Confirm 6.75 lies between 6 and 12.

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Original tasks 4 / complete keys

Task 4

For a crouched pose, a student sets H = 2.5 cm, L = 7H, front-leg length 1H, and rear-leg length 1H. Compute L and the two limb lengths, then state one proportion check that still applies.

Answer: L = 17.5 cm. Front-leg length = 2.5 cm. Rear-leg length = 2.5 cm. One check that still applies is that segment lengths must sum to 17.5 cm, with tail length equal to L minus the other four segments.

Reason: Multiply 7 by 2.5 to get 17.5 cm and 1 by 2.5 to get 2.5 cm for each limb. A crouch changes limb length but not the requirement that segment sums equal L.

Check: Add head 2.5, neck 2.5, torso 5, hips 2.5, and tail 5 to confirm 17.5 cm. Confirm both limb lengths equal 2.5 cm and are recorded in the limb panel.

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Source rubric / reflection

- [ ] Head-to-tail axis is present and labelled with snout and tail endpoints.
- [ ] Head length H is measured and recorded in one consistent unit.
- [ ] Total length L is a whole-number multiple of H between 6H and 8H.
- [ ] Segment boxes cover head, neck, torso, hips, and tail without gaps or overlaps.
- [ ] Segment lengths sum correctly to L.
- [ ] Front-leg attachment lies inside the torso box and rear-leg attachment inside the hips box.
- [ ] Limb lengths and foot positions are recorded in the limb-placement panel.
- [ ] Outline connects landmarks smoothly while preserving measured proportions.
- [ ] Labels use the defined x-height convention consistently.
- [ ] Valid alternative poses are accepted if landmarks and arithmetic remain consistent.

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