Poinsettia Contour Drawing: Compare Bract and Leaf Edges

Original tasks 1, 2 / complete keys

Task 1

A poinsettia has a bract span of 16 cm and a leaf span of 8 cm. Your drawing shows a bract span of 14 cm and a leaf span of 8 cm. Compute both ratios and decide whether the drawing is within a tolerance of 0.15.

Answer: Subject ratio is 16 divided by 8 equals 2.00. Drawing ratio is 14 divided by 8 equals 1.75. The difference is 0.25, which is greater than 0.15, so the drawing is not close enough; widen the bracts.

Reason: Divide the bract span by the leaf span for both subject and drawing, then subtract the smaller ratio from the larger. Compare the difference with the stated tolerance.

Check: Re-measure both spans in centimeters, recompute the ratios, and confirm the difference is 0.25. Then adjust the bract span to about 16 cm and recompute to confirm a ratio near 2.00.

Task 2

Describe how you would draw a leaf edge that has five shallow teeth on one side, using the convention that leaf teeth are short direction changes. Include how you would check that the bracts remain distinct.

Answer: Draw the leaf edge as a series of five short changes in direction, each tooth no deeper than about one-tenth of the leaf width. Keep the bract edges smooth and gently wavy. Check distinctness by comparing the two edges side by side: the leaf should show clear direction changes, while the bract should not.

Reason: The convention assigns teeth to leaves and smooth curves to bracts. Limiting tooth depth keeps the outline readable and prevents the leaf from looking jagged like a different plant.

Check: Count the direction changes on the leaf edge; there should be five. Trace the bract edge with a finger and confirm it has no sharp direction changes. If the bract shows teeth, smooth them.

Poinsettia Contour Drawing: Compare Bract and Leaf Edges

Original tasks 3, 4 / complete keys

Task 3

A drawing has a bract span of 11 cm and a leaf span of 7 cm. The subject has a bract span of 13 cm and a leaf span of 8 cm. Compute both ratios and state one specific adjustment that would bring the drawing closer to the subject ratio.

Answer: Subject ratio is 13 divided by 8 equals 1.625. Drawing ratio is 11 divided by 7 equals about 1.571. The difference is about 0.054, which is within 0.15, so the drawing is close enough. A specific adjustment would be to widen the bracts by about 1 cm to reach a ratio closer to 1.625.

Reason: Both ratios are computed by dividing bract span by leaf span. The small difference shows the drawing is acceptable, but a minor bract adjustment improves the match.

Check: Recompute 13 divided by 8 and 11 divided by 7. Confirm the difference is about 0.054. After widening the bracts to 12 cm, recompute 12 divided by 7 equals about 1.714 and note the new difference from 1.625.

Task 4

You are drawing a poinsettia with three bracts and four leaves. State a drawing order that keeps the stem as an anchor, and explain how you would use the smooth-versus-toothed convention for each part.

Answer: Draw the stem first as two nearly parallel lines. Then draw the lowest leaf, returning to the stem before starting the next leaf. Continue upward through all four leaves, using short direction changes for any teeth. Draw the three bracts last, using smooth or gently wavy curves. This order keeps every edge connected to the stem and makes the edge convention easy to apply.

Reason: Starting at the stem and working upward prevents the outline from drifting. Drawing bracts last lets you switch cleanly from the toothed leaf convention to the smooth bract convention.

Check: Trace each edge back to the stem and confirm there are no gaps. Count four leaf edges with direction changes and three bract edges without sharp changes. If any bract shows teeth, smooth it and recheck.

Poinsettia Contour Drawing: Compare Bract and Leaf Edges

Source rubric / reflection

- [ ] Convention stated clearly in one sentence before drawing.
- [ ] Bract edges drawn smooth or gently wavy, distinct from leaf edges.
- [ ] Leaf edges show deliberate teeth or lobes consistent with the stated convention.
- [ ] Stem connects all parts without gaps or floating edges.
- [ ] Bract-to-leaf span ratio within about 0.15 of the measured subject ratio.
- [ ] Line is continuous and even in weight, with no shading inside the contour.
- [ ] Valid alternatives accepted if the bract-leaf distinction remains clear under the stated convention.

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