Draw a Strawberry Cross-Section: Core, Seed Rings, and Flesh

Original tasks 1, 2 / complete keys

Task 1

An outline is 60 mm wide and 90 mm tall. Calculate the core top and bottom positions using the 20 percent rule, and the core width using the one-fifth rule.

Answer: Core top: 18 mm below the top. Core bottom: 18 mm above the bottom tip. Core width: 12 mm at the widest.

Reason: 20 percent of 90 mm is 18 mm; one-fifth of 60 mm is 12 mm. These are hypothetical proportions for the convention.

Check: Recompute 0.20 × 90 for the top and bottom positions and 60 ÷ 5 (one-fifth) for the core width; confirm units are millimetres and values match the drawing marks.

Task 2

A drawing has a half-width of 30 mm at the widest point. If you use ring offsets of 5 mm, 10 mm, and 15 mm from the core edge, do all three rings fit inside the outline? Explain.

Answer: At the widest point, the full width is 2 × 30 mm = 60 mm. Core full width is one-fifth of 60 mm = 12 mm, so the core half-width is 6 mm. Available flesh on each side at the widest point is 30 mm − 6 mm = 24 mm, so all three offsets (5 mm, 10 mm, 15 mm) fit there. However, the rings must follow the tapering outline. The 5 mm ring fits wherever the local half-width is at least 6 + 5 = 11 mm; the 10 mm ring fits wherever the local half-width is at least 6 + 10 = 16 mm; the 15 mm ring fits only where the local half-width is at least 6 + 15 = 21 mm. So all three rings fit only in the wider upper portion; near the tapering tip, only the 5 mm ring (and possibly the 10 mm ring) fits.

Reason: Subtract the core half-width from the outline half-width to find available flesh width, then compare with the largest offset.

Check: Recompute 2 × 30 mm = 60 mm full width; 60 mm ÷ 5 = 12 mm core width; 12 mm ÷ 2 = 6 mm core half-width. For each offset, add the core half-width: 6 + 5 = 11 mm, 6 + 10 = 16 mm, 6 + 15 = 21 mm. Measure the local half-width at several heights along the tapering outline and confirm each ring is drawn only where the local half-width meets its required value. Keep units in millimetres.

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Original tasks 3, 4 / complete keys

Task 3

You plan to place seeds every 10 mm along a seed ring. The seed ring path is about 120 mm long. How many seed marks should you place, and where should the first and last marks go?

Answer: Place 12 seed marks evenly spaced around the closed ring, giving 12 gaps of about 10 mm. Put the first mark at the top center of the ring, then place marks at 10, 20, ..., 110 mm along the ring path. Do not add a 13th mark at 120 mm, because that point coincides with the first mark. The gap from the 12th mark back to the first is also about 10 mm.

Reason: 120 mm divided by 10 mm equals 12 intervals; using 12 marks keeps spacing close to 10 mm without doubling at the start.

Check: Count the marks and measure two adjacent gaps; both should be about 10 mm within 2 mm.

Task 4

A student labels the core with the baseline 3 mm below the core top and the midline of the letters 5 mm above the baseline. Is the label placed correctly under the convention? What should be checked?

Answer: The placement is acceptable under the convention. The baseline is 3 mm below the core top and the letter x-height midline is 5 mm above the baseline; the convention does not fix a specific millimetre height, only that the baseline is horizontal and the x-height midline is clear. Check that the leader line points to the core and that the label does not overlap the seed ring.

Reason: The convention fixes the letter baseline to letter x-height midline and legibility, not a specific font or exact millimetre height. Placement and clarity are the checks.

Check: Verify the baseline is horizontal, the letters are legible, and the leader line ends inside the core region.

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Source rubric / reflection

- [ ] Outline is a single closed shape, wider at top and tapering to a bottom point, symmetric within 5 mm.
- [ ] Core is a narrow vertical oval centered on the midline, with top and bottom near the 20 percent marks.
- [ ] At least two flesh rings follow the outline shape with even spacing within 2 mm.
- [ ] Seed marks form a ring about 5 mm inside the outline, spaced about 10 mm apart, and none lie in the core.
- [ ] Labels use the letter baseline to letter x-height midline convention, are legible, and point to correct regions.
- [ ] Valid alternatives: letter style, exact seed shape, and slight outline asymmetry are acceptable if the checks pass.

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