Drawing Thorns on a Curved Stem: Spike Placement and Curve

Original tasks 1, 2, 3, 4 / complete keys

Task 1

A curved stem centerline measures 60 mm. You choose a hypothetical spacing of 12 mm and alternating sides. How many intervals and placement points do you mark?

Answer: 5 intervals and 6 placement points.

Reason: 60 divided by 12 equals 5 intervals. The number of points is intervals plus one, so 6 points.

Check: Recount intervals between points and confirm 5 gaps and 6 points.

Task 2

You have 8 placement points on a stem. How many intervals are between the first and last point?

Answer: 7 intervals.

Reason: Intervals equal points minus one. 8 minus 1 equals 7.

Check: Count the gaps between consecutive points from first to last.

Task 3

A thorn base is centered on a left-side tick. The thorn tip is drawn crossing the stem centerline to the right. Is this acceptable under the lesson convention?

Answer: No. The tip should point away from the stem and not cross the centerline.

Reason: Crossing the centerline makes the thorn read as belonging to the opposite side and breaks the placement convention.

Check: Trace the tip relative to the centerline; if it crosses, shorten or reangle the tip.

Task 4

A stem has 4 intervals of 15 mm each. What is the total centerline length used for spacing?

Answer: 60 mm.

Reason: 4 intervals multiplied by 15 mm equals 60 mm.

Check: Add the four intervals: 15 plus 15 plus 15 plus 15 equals 60.

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Source rubric / reflection

- [ ] Stem centerline is smooth and clearly drawn.
- [ ] Placement points are marked at approximately equal intervals.
- [ ] Thorns alternate sides according to the stated convention.
- [ ] Each thorn has a broad base meeting the stem edge.
- [ ] Each thorn tapers to a single sharp tip pointing away from the stem.
- [ ] No thorn tip crosses the stem centerline.
- [ ] Spacing arithmetic is shown or checkable.
- [ ] Valid alternative conventions are accepted if stated and consistent.

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