Draw Henna-Style Vine and Petal Line Patterns

Original tasks 1, 2 / complete keys

Task 1

Draw a continuous S-curve vine spine 8 cm long on plain paper. Mark three branch points at 2 cm intervals. Describe your line quality and spacing.

Answer: A smooth S-curve with no pen lifts, branch marks at 2, 4, and 6 cm, each within 5 mm of the target.

Reason: The S-curve practices whole-arm movement; marking intervals builds rhythm and prepares for motif placement.

Check: Measure the curve length with a ruler and check branch marks against the 2 cm intervals.

Task 2

At each of three nodes on a straight 6 cm line, draw one petal 1 cm tall alternating left and right. Keep petal widths about 0.5 cm. Describe how you checked consistency.

Answer: Three petals at 2, 4, and 6 cm, alternating sides, heights within 2 mm of 1 cm, widths near 0.5 cm.

Reason: Alternating sides balances the design; measuring height and width ensures consistent motif size.

Check: Use a ruler to measure each petal's height and width; compare against 1 cm and 0.5 cm targets.

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Original tasks 3, 4 / complete keys

Task 3

Create a dot cluster of five dots spaced 3 mm apart in a row, using dots about 1 mm across (hypothetical example). Then add a second row of five dots 3 mm below the first, offset by 1.5 mm. Describe the spacing pattern and check that no dots touch.

Answer: Two rows of five dots. Within each row, dots are 3 mm apart horizontally. The rows are 3 mm apart vertically, and the second row is shifted 1.5 mm to the right. With 1 mm dots, each dot has a 0.5 mm radius. The same-row center-to-center distance is 3 mm, giving edge-to-edge clearance of 3 - 0.5 - 0.5 = 2 mm. The diagonal center-to-center distance between a dot and the nearest dot in the other row is sqrt(1.5^2 + 3^2) = sqrt(2.25 + 9) = sqrt(11.25) ≈ 3.35 mm (hypothetical example), giving edge-to-edge clearance of about 3.35 - 0.5 - 0.5 = 2.35 mm. The nearest center-to-center distance is the same-row 3 mm (edge-to-edge 2 mm); the diagonal center-to-center distance is farther at about 3.35 mm (edge-to-edge about 2.35 mm). The minimum edge-to-edge clearance is therefore the same-row 2 mm, so no dots touch.

Reason: Offset rows create a staggered texture; consistent spacing prevents merging and keeps the pattern readable.

Check: Measure horizontal gaps within each row (target 3 mm), the vertical gap between rows (target 3 mm), and the horizontal shift of the second row (target 1.5 mm). Confirm no dot touches another. The same-row center-to-center distance is 3 mm (edge-to-edge 2 mm); the diagonal center-to-center distance is farther, about 3.35 mm (edge-to-edge about 2.35 mm). The minimum edge-to-edge clearance is therefore the same-row 2 mm, so no dots touch.

Task 4

On a simple hand-outline frame (describe it as a 12 cm tall outline), plan a vine spine from bottom to top with four branch points. Add petals at two branches and a dot cluster at one gap. Keep all marks 5 mm inside the outline.

Answer: A continuous vine from bottom to top, four branches spaced about 2.5 cm apart, two petals 1 cm tall, one three-dot cluster, all marks at least 5 mm from the outline edge.

Reason: Composing within a frame teaches boundary awareness and balanced placement of motifs and fills.

Check: Measure the distance from each mark to the nearest outline edge; confirm it is at least 5 mm.

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Source rubric / reflection

- [ ] Vine spine is continuous with no breaks or jagged edges.
- [ ] Branch points are spaced within 5 mm of the planned interval.
- [ ] Petal heights are within 2 mm of each other.
- [ ] Dots are spaced at least 3 mm apart with no merging.
- [ ] Pattern stays within the hand-outline frame with a 5 mm margin.
- [ ] Overall composition balances dense and open areas.

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