Draw Koru Spirals and Interlocking Patterns: A Step-by-Step Guide

Original tasks 1, 2, 3 / complete keys

Task 1

Draw a single koru with a 4 mm inner circle, one and a quarter turns, and 3 mm growth per quarter-turn. Use a 12 mm stem. State your direction and line-weight convention.

Answer: A valid drawing shows a 4 mm circle, five quarter-turns total (one and a quarter turns), final radius 4 + 5×3 = 19 mm, a tapered last half-turn, and a 12 mm stem. Direction and line-weight convention are stated.

Reason: The arithmetic sets the final radius; the taper and stem follow the construction steps. Any direction is valid if consistent.

Check: Measure the inner circle and stem; count quarter-turns; confirm no self-crossing and a gradual taper.

Task 2

On a 30 mm grid, place four koru motifs in a 2×2 staggered arrangement. Alternate spiral direction by row. Describe or draw the result.

Answer: Use a 2×2 grid of 30 mm cells (60 mm × 60 mm total). Row 1: two motifs at cell centers, clockwise. Row 2: two motifs at cell corners, counterclockwise. Assume each body span is under 30 mm and stems are about 12 mm (hypothetical), angled into the gaps. At that size, check that no lines cross.

Reason: Staggering offsets rows by half a cell; alternating direction enhances interlocking. The grid size is hypothetical and can be adjusted.

Check: Verify the grid is 2×2 cells of 30 mm, centers are staggered (cell centers in row 1, cell corners in row 2), directions alternate, and stems angled into gaps do not collide at the stated motif size.

Task 3

Take one koru and redraw it with heavy outer edge and light inner edge. Then redraw the same koru with the reverse convention. Compare.

Answer: Two drawings of the same spiral with opposite line-weight conventions. Both are valid if consistent and the transition is gradual.

Reason: Line weight is a convention, not a fixed rule. The exercise tests consistent application.

Check: Check that each drawing uses one convention throughout and that heavier lines follow the chosen contour.

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Original tasks 4 / complete keys

Task 4

Design a row of three interlocking koru motifs with stems pointing into the gaps between the next row's motifs. Use a 25 mm cell (hypothetical) and scale each motif so its body span is under 25 mm (for example, about 20 mm, hypothetical). State spacing and direction.

Answer: Three motifs in a row, evenly spaced at 25 mm, each scaled so its body span is under 25 mm (for example, about 20 mm, hypothetical), with stems angled toward gaps. Direction is consistent or alternating as stated. No overlaps.

Reason: The row tests spacing and stem placement. The cell size is a chosen example, not a standard.

Check: Measure spacing; confirm each body span is under 25 mm, stems enter gaps, and lines do not cross.

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Source rubric / reflection

- [ ] Spiral is continuous and does not cross itself.
- [ ] Taper is gradual from body to stem.
- [ ] Stem meets the body smoothly and is proportionate.
- [ ] Line-weight convention is stated and applied consistently.
- [ ] Interlocking pattern uses even spacing and no overlapping lines.
- [ ] Valid alternatives (direction, tightness, curved stem) are accepted if consistent and clearly drawn.

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