Draw an Aztec Serpent Motif: Coil, Feather, and Pattern

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

Task 1

A coil has four turns with gaps of 5 mm, 5 mm, 7 mm, and 5 mm. Identify the inconsistent gap and state the corrected value if the intended gap is 5 mm.

Answer: The third gap is 7 mm; it should be 5 mm.

Reason: Three gaps match the intended 5 mm, so the 7 mm gap is the outlier.

Check: Measure each gap with a ruler and compare to the intended value.

Task 2

X-height is 12 mm. A feather is drawn 20 mm long. Is it within the suggested 1.5 times x-height guideline, and by how much does it differ?

Answer: The guideline length is 18 mm; the feather is 2 mm longer.

Reason: 1.5 times 12 mm equals 18 mm; 20 mm minus 18 mm equals 2 mm.

Check: Multiply x-height by 1.5 and subtract from the feather length.

Task 3

A pattern strip is 96 mm long with units every 8 mm. How many units fit, and what is the last interval if the first unit starts at 0 mm?

Answer: 12 units fit; the last interval ends at 96 mm.

Reason: 96 divided by 8 equals 12 equal intervals.

Check: Divide strip length by interval and count marks.

Task 4

You place four feathers at arc points 0, 30, 60, and 95 mm along a 120 mm outer coil. Which point is inconsistent for equal spacing, and what should it be?

Answer: The point at 95 mm is inconsistent; equal spacing would place it at 90 mm.

Reason: Equal spacing of four points over 120 mm gives intervals of 30 mm: 0, 30, 60, 90.

Check: Divide total arc length by the number of intervals and compare each point.

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Source rubric / reflection

- [ ] Coil gaps are equal within 1 mm at measured points.
- [ ] Feathers are placed at equal intervals and length is near 1.5 times x-height.
- [ ] Pattern band height equals x-height and units repeat at equal intervals.
- [ ] Line weight is consistent and joins are clear.
- [ ] Redrawn version matches the first in spacing and proportion.

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