Draw a Hawaiian Lei: Strand Construction and Flower Layering

Original tasks 1, 2, 3 / complete keys

Task 1

A lei has four flowers on a straight strand. Centers are at 3 cm, 6 cm, 9 cm, and 12 cm from the left end. Using the convention that each flower overlaps the one to its left, which flower sits in front: the one at 6 cm or the one at 9 cm?

Answer: The flower at 9 cm sits in front of the flower at 6 cm.

Reason: The convention says each flower overlaps the one to its left. The 9 cm flower is to the right of the 6 cm flower, so it overlaps it.

Check: Trace left to right and confirm the right flower covers the left flower's edge at each neighboring pair.

Task 2

A student marks five centers on a 20 cm arc at 2 cm, 6 cm, 10 cm, 14 cm, and 18 cm. Are the gaps equal? State the gap sizes and say whether the spacing passes the equal-gap check.

Answer: The gaps are 4 cm, 4 cm, 4 cm, and 4 cm, so the spacing passes the equal-gap check.

Reason: Subtract neighboring center positions: 6-2=4, 10-6=4, 14-10=4, and 18-14=4. All gaps are 4 cm.

Check: List each neighboring pair and subtract the smaller position from the larger; confirm all results match.

Task 3

A drawing shows a strand with six flowers, but the third flower's center is completely covered by petals. Using the construction rules, name the problem and describe one fix.

Answer: The problem is a hidden center, which breaks the strand structure. One fix is to redraw that flower's petals outward from the center mark so the center stays visible.

Reason: The rules require every center to remain visible so the strand can be traced in order. Covering a center makes the flower look detached from the strand.

Check: Trace the strand and confirm all six centers are visible in order; if one is missing, adjust that flower.

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Original tasks 4 / complete keys

Task 4

A practice lei uses a new five-petal flower shape on a short arc with four centers. The student draws petals for the first flower pointing left and petals for the second flower pointing right. Does this follow the overlap convention if the stated convention is 'each flower overlaps the one to its left'? Explain.

Answer: No. The petal direction alone does not decide overlap, but the drawing must still show the right flower covering the left flower's edge. If the second flower does not overlap the first in that direction, the convention is broken.

Reason: The convention is about which flower sits in front, not about petal orientation. The right flower must overlap the left flower's edge for every neighboring pair.

Check: For each neighboring pair, confirm the right flower's edge sits over the left flower's edge; if not, adjust the layering.

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Source rubric / reflection

- [ ] Strand curve is drawn first and is visible between flowers.
- [ ] Flower centers are marked and remain visible after petals are added.
- [ ] Spacing between neighboring centers is approximately equal.
- [ ] One overlap convention is stated and applied consistently.
- [ ] Petals connect to their own center and do not float.
- [ ] The drawing can be traced from one end of the strand to the other in order.

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