Draw Tortilla Chips with a Dip Bowl: Shape Variation and Composition

Original tasks 1, 2, 3 / complete keys

Task 1

In a 10 cm wide composition box, a bowl rim ellipse is 5 cm wide and placed 2 cm from the left edge. How much horizontal space remains to the right of the bowl?

Answer: 3 cm remains to the right.

Reason: The bowl ends at 2 + 5 = 7 cm from the left. The box is 10 cm wide, so 10 - 7 = 3 cm remains. Hypothetical example; measure your own box.

Check: Add the left offset and bowl width, then subtract from the box width: 10 - (2 + 5) = 3 cm.

Task 2

A shape plate has three spaces each 4 cm wide with 1 cm gaps between them. What is the total width of the shape plate?

Answer: 14 cm total width.

Reason: Three spaces give 3 x 4 = 12 cm. Two gaps give 2 x 1 = 2 cm. Total is 12 + 2 = 14 cm. Hypothetical example.

Check: Multiply spaces by width, multiply gaps by gap size, then add: (3 x 4) + (2 x 1) = 14 cm.

Task 3

A bowl ellipse is 6 cm wide and 3 cm tall. A second inner ellipse is 4 cm wide and 2 cm tall, centered inside the rim. How much horizontal margin exists on each side between the inner and outer ellipses?

Answer: 1 cm margin on each side.

Reason: The difference in width is 6 - 4 = 2 cm. Centered, this splits into 2 / 2 = 1 cm on each side. Hypothetical example.

Check: Subtract inner width from outer width, then divide by two: (6 - 4) / 2 = 1 cm.

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Original tasks 4 / complete keys

Task 4

You plan five chips around a bowl: two overlapping the rim, one leaning on the side, and two on the table line. If each chip needs about 2 cm of clear space and the table line is 12 cm long, is the plan feasible? Explain with arithmetic.

Answer: Yes, the plan is feasible with 2 cm of spare space.

Reason: Five chips at 2 cm each need 5 x 2 = 10 cm. The table line is 12 cm, so 12 - 10 = 2 cm remains. Hypothetical example; adjust to your own chip size and table line.

Check: Multiply chip count by clear space, compare to table line length: 5 x 2 = 10 cm, and 10 cm is less than 12 cm.

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Source rubric / reflection

- [ ] Shape variety: at least two of triangle, curved, and broken-edge chips appear.
- [ ] Bowl construction: rim is an ellipse wider than tall, with a short side wall and a base curve.
- [ ] Composition: chips are arranged around the bowl with at least one partially hidden and breathing space between clusters.
- [ ] Edge quality: chip edges show small irregularities; bowl rim is smooth and clean.
- [ ] Grounding: chips and bowl touch the table line or each other without floating.
- [ ] Valid alternatives: clear, intentional marks are accepted even if letter styles or handwriting vary.

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