Rainbow Scale Dragon: Row Coloring and Wing Shape Drawing

Original tasks 1, 2, 3 / complete keys

Task 1

A body band is 5 cm tall and divided into five equal rows. What is the height of each row in centimeters?

Answer: 1 cm

Reason: Divide the total band height by the number of rows: 5 cm divided by 5 equals 1 cm per row.

Check: Multiply 1 cm by 5 rows to confirm the total is 5 cm.

Task 2

A student plans four colors for five rows: red, orange, yellow, green. What is the problem and how can it be fixed?

Answer: There are five rows but only four colors, so one row would repeat or lack a planned color. Add a fifth color, such as blue, to complete a smooth five-color sequence.

Reason: The convention requires one planned color per row and a smooth progression. Counting rows and colors shows a mismatch.

Check: Count the rows and the color names; they should match, and the sequence should have no repeats or jumps.

Task 3

A wing has a shoulder point, a tip point 6 cm outward and 2 cm upward, and a lower point 4 cm outward and 3 cm downward. How many straight or curved connections are needed to close the wing shape?

Answer: Three connections

Reason: Connect shoulder to tip, tip to lower point, and lower point back to shoulder. Three points form a closed shape with three connections.

Check: Trace the outline and count the connections between the three points; there should be three.

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Original tasks 4 / complete keys

Task 4

A student colors row 1 red, row 2 yellow, row 3 orange, row 4 green, row 5 blue. Is the rainbow order smooth? Explain.

Answer: No. Yellow and orange are out of order. A smooth order would place orange before yellow, for example red, orange, yellow, green, blue.

Reason: Compare adjacent colors: red to yellow skips orange, and yellow to orange reverses the expected progression.

Check: List the colors in row order and check that each step moves smoothly without repeats or reversals.

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Source rubric / reflection

- [ ] Five scale rows are clearly labeled and separated by horizontal guides.
- [ ] Scales within each row are overlapping arcs that touch both row boundaries.
- [ ] Rainbow colors progress smoothly from row 1 to row 5 without repeats or jumps.
- [ ] Two wing shapes are constructed from three clear points each.
- [ ] Wings are similar in size and angle, with readable silhouettes.
- [ ] Valid alternatives are accepted if conventions and checks are met.

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