Scale-Texture Makeup: Fish, Reptile, and Mermaid Patterns

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

Task 1

A forearm zone is 8 grid squares wide. You place one shimmer band 2 squares wide. What fraction of the zone width does the band cover?

Answer: Two eighths, which simplifies to one quarter of the zone width.

Reason: Divide the band width by the zone width: 2 divided by 8 equals 0.25, or one quarter.

Check: Count the squares again and confirm the band touches exactly 2 of the 8 squares.

Task 2

You draw three fish rows, each 2 squares tall, with a half-square overlap between rows. What total height do the three rows cover?

Answer: Five squares total height.

Reason: Three rows at 2 squares each would be 6 squares, but two overlaps of half a square remove 1 square, leaving 5.

Check: Mark the baseline of each row on the grid and count the squares from the first baseline to the last top edge.

Task 3

A reptile swatch uses 1-square polygons in staggered rows across a 5-square-wide box. You draw two full rows. How many polygons are in the two rows if each row holds 5?

Answer: Ten polygons.

Reason: Two rows multiplied by 5 polygons per row equals 10.

Check: Count the polygons in each row separately and add the two counts.

Task 4

A mermaid zone is 4 squares wide and you want shimmer to cover one half of the zone width. How many squares wide should the band be?

Answer: Two squares wide.

Reason: One half of 4 squares is 2 squares, because 4 multiplied by 0.5 equals 2.

Check: Measure the band against the grid and confirm it spans exactly 2 of the 4 squares.

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Source rubric / reflection

- [ ] Convention box states scale unit, baseline, midline, x-height, overlap rule, and edge style.
- [ ] Fish, reptile, and mermaid swatches each show their stated structural difference.
- [ ] Each zone has one gradient arrow with light and dark ends labeled.
- [ ] Each shimmer band is measured in grid squares and written as a fraction of zone width.
- [ ] Numerical examples are labeled hypothetical and measured values are recorded.
- [ ] Answer sheet notes that valid alternatives are accepted when the convention is followed.

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