How to Draw Gemstone Scales: Overlapping Facet Rows

Original task 1 / independent drawing and calculation

Task 1

On a 40 mm wide strip, draw two rows of gemstone scales with w = 10 mm and h = 8 mm (hypothetical). Row 0 starts at the left edge. State the midpoint positions for both rows and check the offset.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 2 / independent drawing and calculation

Task 2

A plate is 50 mm wide with w = 10 mm and h = 6 mm (hypothetical). Row 0 has 5 scales. How many scales can row 1 have if it is offset by w/2 and clipped at both borders? Explain.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 3 / independent drawing and calculation

Task 3

You draw three rows with w = 12 mm and h = 9 mm (hypothetical). Row 0 starts at 0 mm. List the guide line depths and the midpoint positions for row 2. Check that row 2 aligns with row 0.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

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Original task 4 / independent drawing and calculation

Task 4

A scale has a top edge from 5 mm to 25 mm on guide 0 and a lower point 15 mm below guide 0. Neighboring row-0 scales repeat every 20 mm. Row 1 is shifted by w/2=10 mm and drawn 15 mm below guide 0. Give the top-edge midpoint and row-1 midpoints, then check the lower point.

Keep the original task measurements. Use the full drawing sheet in this PDF for a response needing more room; use the stated paper size when a task specifies larger paper.

Full drawing sheet / reusable blank workspace

Reusable full drawing sheet for Tasks 1 to 4. Print another copy when needed. Keep all original task measurements; if a task specifies larger paper, use that paper size.