Draw Ripped Dragon-Scale Skin: Layered Rows and Tear Construction

Original tasks 1, 2 / complete keys

Task 1

On an 8 cm by 6 cm patch, draw two scale rows with 1 cm units and a half-unit offset. Add a tear from (2 cm, 1 cm) to (5 cm, 4 cm) with a 0.4 cm midpoint width. Describe where the underlayer sits and how many broken fragments you add.

Answer: Row guides at 0 and 2 cm; second row offset by 0.5 cm. Tear edges taper to points, widest 0.4 cm at midpoint. Underlayer sits 0.2 cm inside the tear edges. Add one broken fragment per row along the tear edge, each under 0.4 cm.

Reason: The patch size sets the row spacing. The tear width is a chosen example value that can be checked with a ruler. The underlayer inset keeps the tear edge visible.

Check: Measure midpoint tear width with a ruler; confirm underlayer is inside the tear only; count one fragment per row.

Task 2

A student draws a tear that crosses three rows but leaves one full scale crossing the opening. Identify the error and state a fix using the lesson convention.

Answer: The error is a full scale crossing the tear. Fix by erasing that scale and replacing it with a broken fragment that stops at the tear edge, keeping the row offset and overlap unchanged.

Reason: The tear must interrupt rows; a full scale crossing the opening breaks the layered construction and hides the underlayer.

Check: Trace the tear path and confirm no complete scale outline crosses it; check that fragments are shorter than 0.4 cm.

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Original tasks 3, 4 / complete keys

Task 3

On a 12 cm by 8 cm patch with 1 cm units, place a tear from (4 cm, 1 cm) to (7 cm, 5 cm). The midpoint width is 0.6 cm. Calculate the underlayer inset if it is 0.2 cm inside each edge, and state the visible underlayer width at the midpoint.

Answer: The underlayer inset is 0.2 cm on each side, so the visible underlayer width at the midpoint is 0.6 minus 0.4 equals 0.2 cm.

Reason: Subtracting the inset from both edges gives the remaining visible width. This uses simple arithmetic with consistent units.

Check: Measure the tear midpoint width and the underlayer width; confirm the difference is 0.4 cm total inset.

Task 4

Design a shading plan for a tear on a patch lit from the upper left. State where the shadow band goes, its example width, and one highlight placement.

Answer: Place the shadow band inside the tear edge on the lower-right side, about 0.1 to 0.2 cm wide. Add a thin highlight on the broken scale edges on the upper-left side adjacent to the tear.

Reason: Light from the upper left casts shadow on the opposite inside edge. The highlight separates scale from underlayer on the lit side.

Check: Confirm the shadow band is parallel to the tear edge and on the side away from the light; check highlight is on the lit side.

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Source rubric / reflection

- [ ] Three scale rows are present with consistent half-unit offset between alternate rows.
- [ ] Scales overlap the row below by about one-third of a scale unit.
- [ ] The tear interrupts every row it crosses; no full scale crosses the tear opening.
- [ ] The underlayer is visible inside the tear and is darker than the scales.
- [ ] Broken scale fragments along the tear edge are short and follow original scale edges.
- [ ] A shadow band runs inside the tear edge opposite the imagined light.
- [ ] Measurements are consistent in units and any numerical values are labeled as examples.
- [ ] Valid stylistic alternatives in scale outline are accepted if offset and overlap remain consistent.

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