Faceted Gemstone Drawing: Cut Shapes, Facet Layout and Highlight Placement

Original tasks 1, 2 / complete keys

Task 1

Draw an oval-cut gemstone with a long axis 80 mm and a short axis 50 mm on a 120 mm wide sheet. Place a centred oval table about one third of the girdle width and add radiating facet lines. Shade with light from the upper right.

Answer: The drawing shows an oval girdle 80 mm by 50 mm, a centred oval table about 27 mm wide, radiating facet lines meeting cleanly at table and girdle, and shading lighter on upper-right facets with two highlights there.

Reason: The axes fix the oval shape; the table ratio keeps the crown balanced; radiating lines create closed facets; a single light direction makes adjacent values distinct.

Check: Measure the long and short axes and the table width; confirm the table is roughly one third of the girdle width and that every facet is a closed region.

Task 2

Draw an emerald-cut gemstone as a clipped rectangle 70 mm by 50 mm with corner facets. Add a smaller centred clipped rectangle as the table and connect corresponding corners. Shade with light from the left and place one highlight on a long side facet.

Answer: The drawing shows a clipped rectangle girdle, a centred smaller clipped rectangle table, parallel long-side facet lines, corner facet lines, and shading darker on the right with one highlight on a left-facing long facet.

Reason: The clipped rectangle defines the cut; parallel long-side lines and corner lines create the characteristic emerald-cut facet layout; left light makes left facets lighter.

Check: Confirm the girdle is the widest line, the table is centred, corner facets are closed triangles or quadrilaterals, and the highlight sits inside one facet.

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Original tasks 3, 4 / complete keys

Task 3

Draw a round-cut gemstone with a girdle diameter of 60 mm. Mark a light direction from the top. Shade the pavilion with three values and the crown with two values, keeping the table lightest. Add a thin bright line along the lower girdle.

Answer: The drawing shows a circular girdle, a centred table, radiating crown facets, a tapered pavilion, three pavilion values, two crown values, a lightest table, and a subtle bright line along the lower girdle.

Reason: Separating pavilion and crown values clarifies the two main zones; the table stays lightest because it faces the viewer; the girdle line suggests reflected light without overpowering facet shading.

Check: Squint to confirm the table is lightest and adjacent facets differ; check that the bright girdle line does not cross facet boundaries.

Task 4

Draw any one of the three cut shapes and deliberately place one highlight on a dark facet. Then correct the drawing by moving that highlight to a light-facing facet and adjusting the shading so the light direction is consistent.

Answer: The corrected drawing shows a consistent light direction, with the highlight moved inside a light-facing facet and the previously dark facet either lightened or left dark according to the chosen direction.

Reason: A highlight on a dark facet contradicts the light direction; moving it restores consistency and makes the facet planes read correctly.

Check: Identify the chosen light direction and confirm every highlight lies on a facet facing that direction; check that no highlight sits on the darkest facet.

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Source rubric / reflection

- [ ] Girdle is the widest horizontal line and is symmetrical about the axes.
- [ ] Table is centred and proportionally smaller than the girdle.
- [ ] Facet lines form closed regions without crossing inside a facet.
- [ ] Pavilion tapers symmetrically below the girdle.
- [ ] Shading uses a consistent light direction with distinct adjacent facet values.
- [ ] Highlights are placed only on light-facing facets and follow facet shapes.
- [ ] Final drawing is clean, with construction lines removed or faint.

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