Crystal Drawing Simple: Facet Construction and Shading

Original task 1 / independent drawing and calculation

Task 1

In a 6 by 8 cm guide, draw an elongated shard with an upper tip, uneven shoulders, two unequal side points, and a bottom tip. Add a lengthwise axis and two off-center edges to show three visible planes.

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

Draw a shard that is 5 cm wide and 9 cm tall. Put the widest left point at y=5 cm and the widest right point at y=4 cm, measured down from the top. Add one long face edge from the upper tip to the right wide point and shade with light from the left.

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

On a 6 by 8 cm guide, mark upper tip U=(3,0), left wide point L=(1,4), right wide point R=(5,4), and bottom tip B=(3,8). Draw the long axis U–B and lengthwise edges U–L, U–R, L–B, and R–B. A student adds a horizontal edge L–R. Identify where it crosses the axis and whether it belongs in the lengthwise construction.

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

Shade a three-plane shard with light from the lower right and add a cast shadow. State which plane is darkest and where the shadow falls.

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.