Realistic Glass Drawing: Rim Ellipse, Refraction, Cast Shadow

Original tasks 1, 2 / independent work

Task 1

A glass rim appears 100 mm wide and 25 mm high. Calculate the half-width and half-height and state the ellipse ratio.

Task 2

A base ellipse appears 80 mm wide and 20 mm high. A rim ellipse appears 80 mm wide and 28 mm high. Which ellipse is shallower, and by how many millimeters of half-height?

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Original tasks 3, 4 / independent work

Task 3

Light comes from the upper left. A cast shadow is measured at 60 mm long and 30 mm wide. Describe where to place the shadow relative to the glass base and what to check.

Task 4

You have drawn three refraction lines, but one crosses the glass body without touching any edge or water line. What should you do, and why?