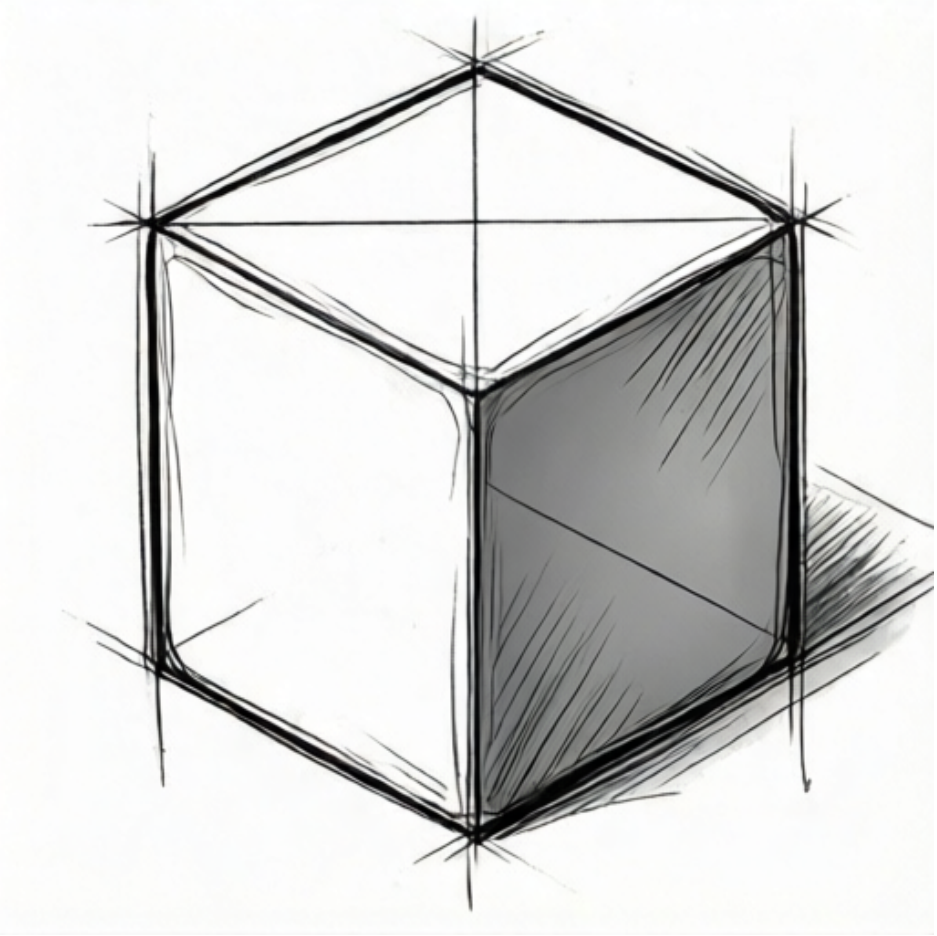
Draw 3D Solid Figures: Depth Lines and Shading Practice

Ordinary topic reference / separately checked pixels



Draw 3D Solid Figures: Depth Lines and Shading Practice

Original worked example / unchanged complete key

Prompt: Draw a cube with a 40 mm front square and 20 mm depth lines, light from the upper left. Show depth lines and three shading zones.

Answer: Front square is 40 mm by 40 mm. From all four corners, draw four parallel depth lines of 20 mm going back to the upper right. Connect the back ends to form the back top edge, back right edge, and exposed portion of the back-left vertical edge. Erase the hidden back-bottom edge and the lower-left depth line (the hidden depth line for this up-right direction). With the light arrow at the upper left, shade the front face light, the top face mid, and the right side dark. Check that the three visible depth lines are 20 mm and parallel.

Reason: The front square establishes the face size. Equal parallel depth lines create the illusion of depth. Removing hidden lines keeps the solid readable. Shading zones follow the light arrow so the form looks three-dimensional.

Check: Measure the three visible depth lines to confirm they are each 20 mm (the hidden fourth is erased or faint). Confirm the front square sides are 40 mm. Check that the light face is toward the upper left and the dark face is opposite, and that the depth direction is consistently up and to the right.