Orthographic Multiview Drawing

Reference I Worked example I A4

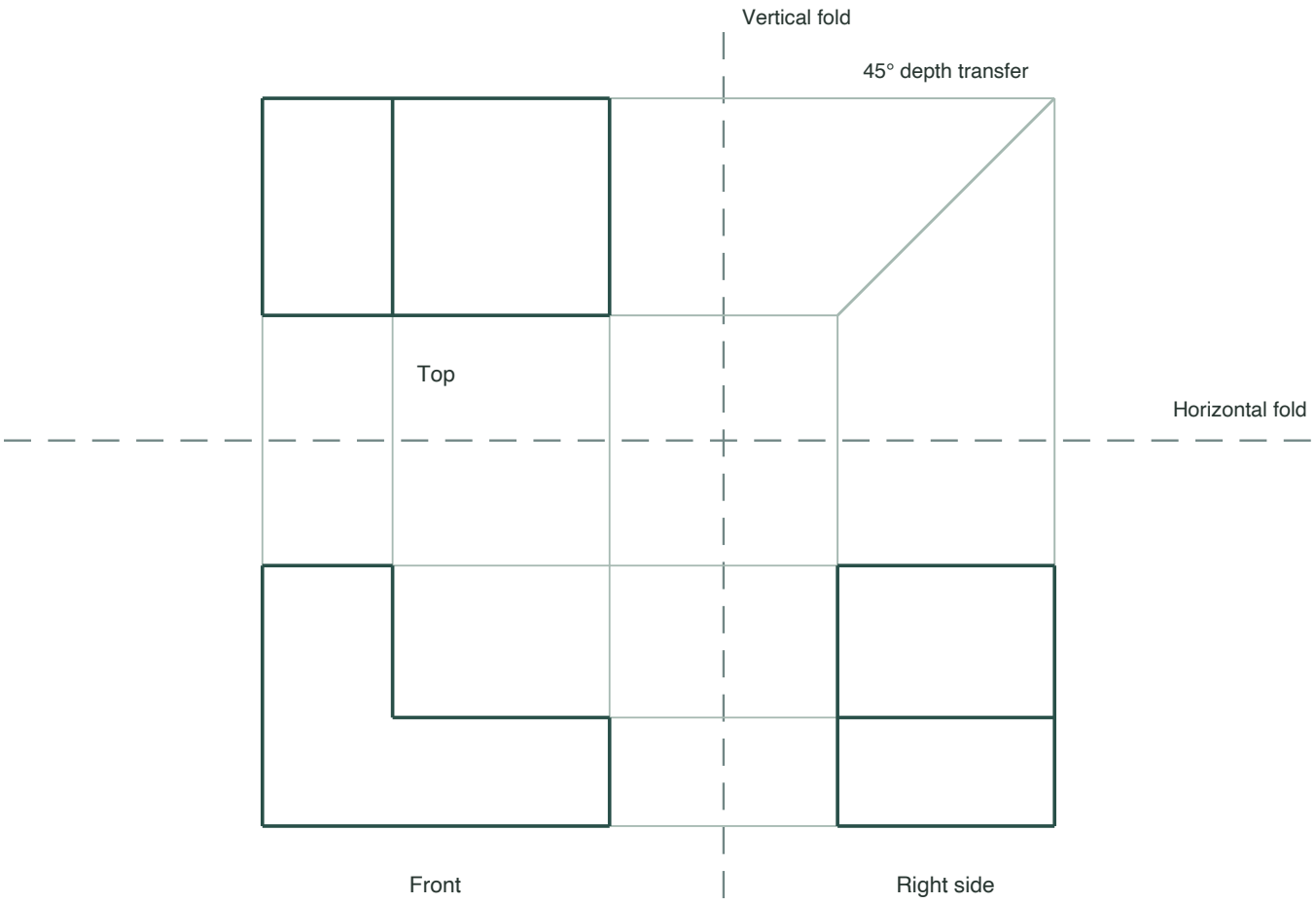
Original prompt

Construct a fold-line multiview plate for an L-shaped block: front view, top view above the horizontal fold line, side view beside the vertical fold line, with projection lines linking corresponding features.

Given solid

Chosen L block: 8 wide, 5 deep and 6 high. The tall left arm is 3 units across. The lower right foot is 2.5 high. The whole L is uniformly 5 units deep.

On this sheet, top is above front and the right view sits to its right.



Answer

Front: an 8-by-6 L-shaped elevation, with x=0–3 up to z=6 and x=3–8 up to z=2.5; both sections have depth 5. Top: an 8-by-5 rectangle divided at x=3. Right side: a depth-5 by height-6 rectangle with a visible ledge at z=2.5. Place top above front and right side to the right. Carry width and height with perpendicular projectors and depth through a 45° miter. Keep visible edges solid, hidden edges dashed, and construction lines light.

Reasoning

The two front portions both extend through the full five-unit depth, so the top footprint is a rectangle with a division at the height change. From the right, the shorter near portion occupies the lower 2.5 units while the taller portion behind it remains visible above, making one ledge in the side view. The fold lines and miter transfer shared coordinates without changing their lengths.

Check

Measure the same 8-unit width in front and top, the same 6-unit height in front and right-side views, and the 5-unit depth in top and side views. Confirm the top division is at x=3, the side ledge is at z=2.5, projectors meet fold lines at 90°, and depth passes through the 45° miter.