Draw a Front-View Orthographic Projection

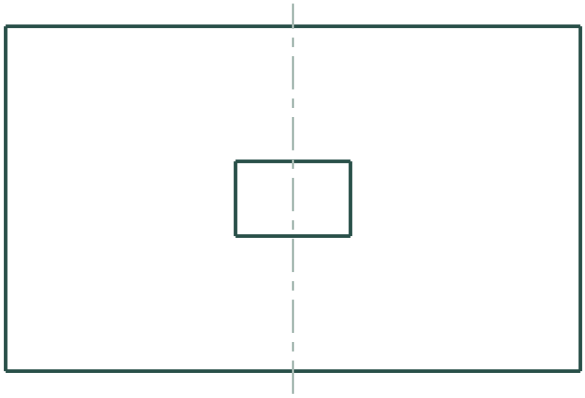
Answer | Task 1 of 4 | A4

Original prompt

Task 1 — Plain block with a rectangular slot on the front face. The slot is cut into the front face and does not pass through, and it is centred horizontally on the block. Construct the front view.

Given object

The slot has straight walls and a flat blind bottom. Its width is centered across the face.



Front view

Answer

Draw the outer rectangle and show the blind slot opening once as a solid rectangle. Add one vertical chain centreline through the slot axis. The bottom perimeter coincides with the opening in front projection, so do not add a dashed duplicate.

Reasoning

The supplied Task 1 slot is straight-walled and blind. Its bottom perimeter matches the opening, so both boundaries project together. Draw the visible opening once as a solid line; the selected vertical chain line marks its alignment.

Check

Check the solid slot opening is centred inside the block and the vertical chain line passes through its axis. Do not draw a second dashed rectangle for the coincident bottom perimeter.

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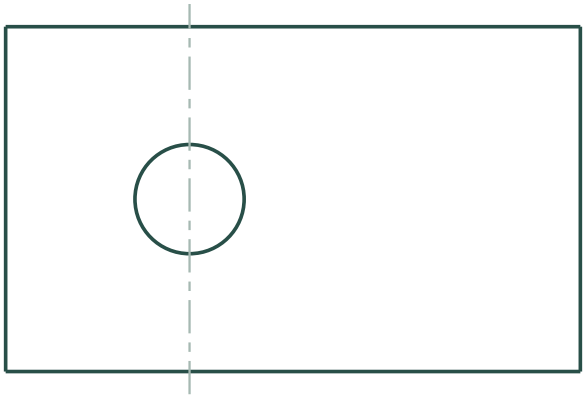
Original prompt

Task 2 — Rectangular block with a through-hole offset to the left. The block has a plain rectangular outline; its round front-to-back bore has equal near and far rims aligned on the same axis, with the centre left of the block's vertical midline. Construct the front view, choose the line types warranted by their projection, and add a vertical chain centreline through the bore centre.

Given object

The circular bore has constant diameter along the front-to-back axis. The rim at the back lies directly behind the rim at the front.



Front view

Answer

Draw the outer rectangle and one visible circle for the bore. Place its centre and vertical chain centreline left of the block's vertical midline. The far rim coincides with the visible rim in front projection, so show the circle once, not again as a dashed line.

Reasoning

The given equal near and far rims share a front-to-back axis. Orthographic projection collapses depth, so both rims map to the same circle. The visible boundary takes precedence; the selected vertical chain line passes through the offset centre.

Check

Check that the bore centre and vertical chain line are left of the block's midline. Show the coincident projected rims once using the warranted visible line type; do not add a duplicate contour.

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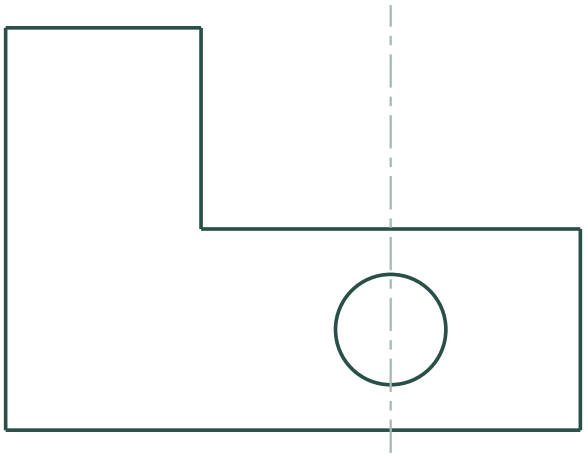
Original prompt

Task 3 — L-shaped bracket seen from the front, with a boss (raised cylinder) on the front face. The L opens to the upper right; the boss is centred on the lower arm. Construct the front view.

Given object

The upper-right cutout gives the L. The cylinder projects out from the front of the lower arm. Show its near circular face.



Front view

Answer

Draw the solid L-shaped front silhouette opening to the upper right. Add one solid circle for the raised boss on the lower arm and one vertical chain centreline through its centre.

Reasoning

The front outline and boss rim are visible boundaries, so draw them solid. The selected vertical chain line marks the boss centre; no separate rear rim is specified for this raised boss.

Check

Check that the L opens upper right, the boss circle sits on the lower arm, and the vertical chain line passes through its centre.

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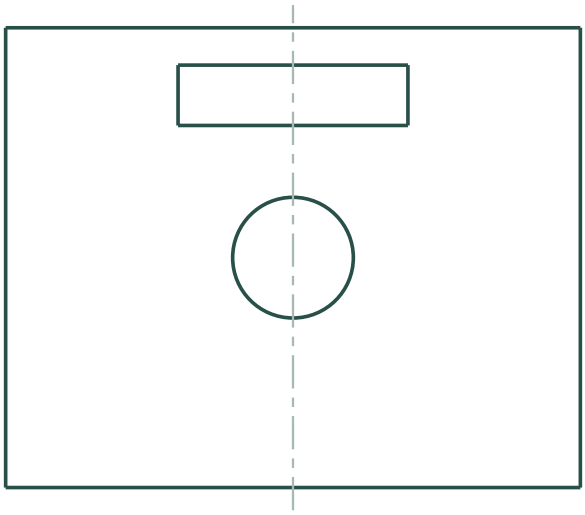
Original prompt

Task 4 — Rectangular block with a through-slot (a slot that passes fully through) and a centred through-hole. The slot is centred horizontally and the hole is centred on the block. Construct the front view with correct line types and a centre line for the hole.

Given object

Place the through-slot above the hole with a clear gap. Both openings share the vertical center line, and both run straight front-to-back.



Front view

Answer

Draw the outer rectangle, then a solid horizontal through-slot above the centred through-hole, leaving the shown clear gap. Draw each visible feature boundary once; the equal far boundaries coincide in projection, so add no duplicate dashed outlines. Use one vertical chain line through both centres.

Reasoning

Both features run front-to-back and have matching near and far outlines, so each pair coincides in this front projection. Show each visible outline once. The supplied setup places the slot above the hole with a clear gap, and their centres share one vertical alignment.

Check

Check the horizontal slot is above and separated from the centred hole. Each feature should have one outline, not a duplicate dashed far outline; one vertical chain line passes through both centres.