

Exercise no 13

New commands: STRETCH, ELEVATION, LOFT

3D modeling, creating views and cross sections.

1. Begin a new drawing and set the view to FRONT. Draw the contour at right, starting at point 0,0. Use JOIN to convert it to one closed polyline.
2. Set the view to TOP. Use ROTATE command to copy the drawn contour (rotate it by 90 degrees around point 0,0).
3. Set the view to LEFT. Use STRETCH command to shorten the central part of the rotated contour by 30 units.
4. Set the view to ISOMETRIC. EXTRUDE both contours to look like the 3D objects at right (the narrower one by at least 250 units, the wider one by at least 220 units). Apply INTERSECT to both 3D objects.
5. Set the view to TOP. Switch off dynamic UCS. Use ELEVATION and RECTANGLE commands to draw two rectangles: ELEVATION 20, RECTANGLE 90,90; @70,40, ELEVATION 80, RECTANGLE 85,85; @80,50. Apply LOFT (with default values of parameters) to create a prism spanned over those two rectangles. Use SUBTRACT command to subtract the prism from the previous object.
6. Check the result using one of isometric views. Set the visual style to conceptual. Set view to FRONT.
7. Switch to LAYOUT. Select a proper printing device (PDF), set paper size to A4, and printing style to monochrome. Insert frame and table block from file A4_EN_L. Verify the attributes in the table.
8. Apply SOLVIEW command to create two projections and one cross section as seen on the reverse page (scale 0.4). Do not forget to name the views and cross section.
9. Manage the layers:

layers *.VIS	red	continuous	0.35mm
layers *.HID	cyan	hidden	0.25mm
layers *.DIM	green	continuous	0.15mm
layers *.HAT	blue	continuous	0.15mm

Set the HPNAME system variable value to ANSI33 (hatch pattern).

10. Apply SOLDRAW command to draw views and cross sections (select frames of the viewports).
11. Dimension the views and cross section (preferably in the model space through the viewports) using correct layers *.DIM. Use MATERIALS command to assign correct material to the foundation (concrete). Set the realistic visual style for the viewport containing isometric view.
12. Add descriptions if necessary. Hide the viewport frames. Check the plot preview.



