Last name : First name : Group :

INSA INSTITUT NATIONAL DES SCIENCES APPLIQUÉES LYON

MECHANICAL DESIGN TEST

50 minutes
No document authorized

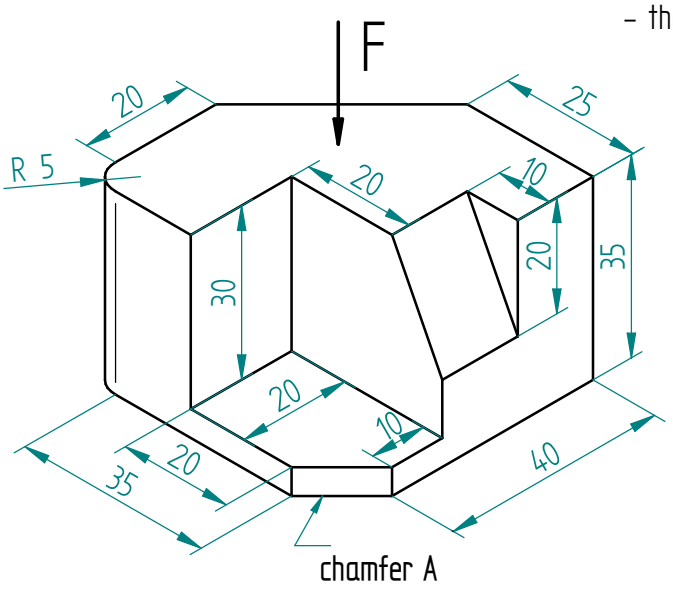
Contains :
2 pages A4 recto verso (response documents 1 to 4)

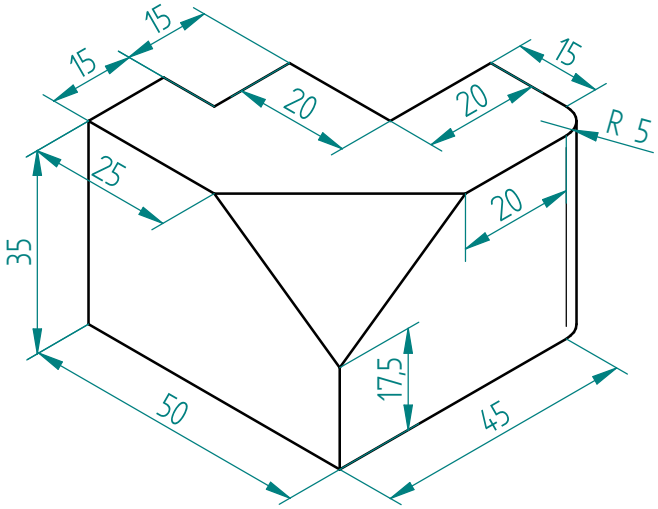
All the questions are independent.

The quality and careful drawinf is subject of evaluation.

Using the perspective views ot the part below complete its draft in 1:1 scale. Your draft should contain:

- the front view along F (without hidden edges)
- the right view (with hidden edges)
- the top view (with hidden edges)





front view along F

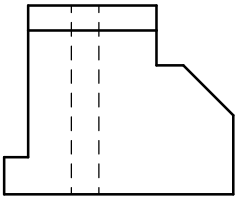
chamfer A

scale 1:1

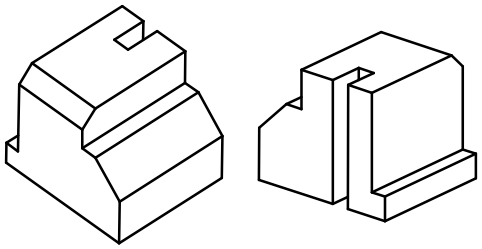
Last name : First name : Group :

1 – Find the correct views knowing the front view and perspective views below :

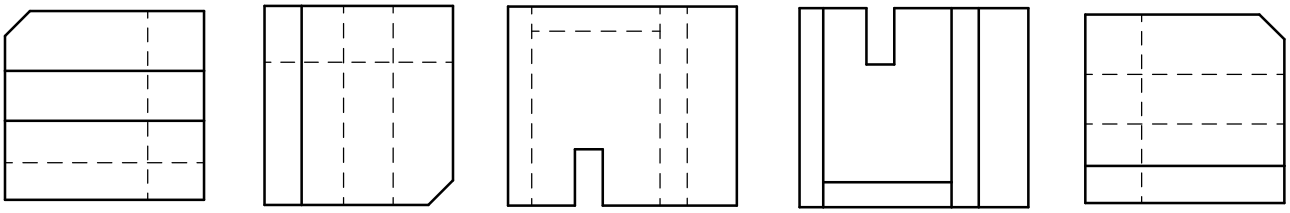
Bottom view	
Right view	
Left view	
Top view	



front view

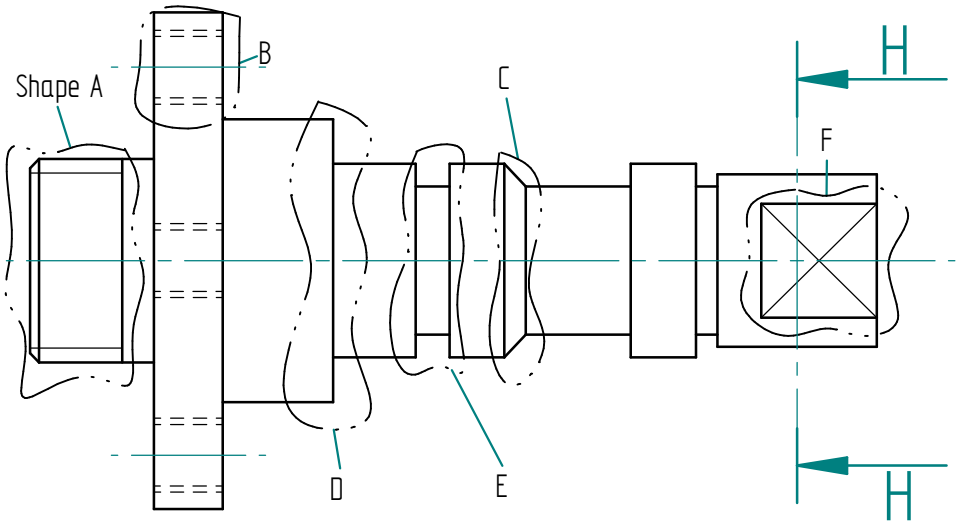


provide appropriate lettre in each box



a b c d e

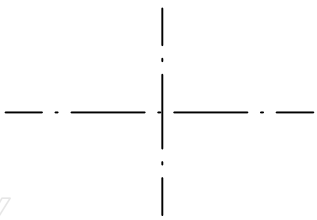
2 – Define appropriate technical terms related to the geometrical features shown below:



A	
B	
C	
D	
E	
F	

NB : chosse among following terms
groove, slot, chamfer, axle, hole, bore, external thread, collar, spot facing, internal thread, rib, cylinder, flat, shoulder

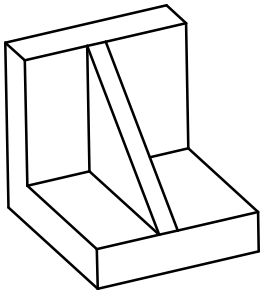
– Draw here
the extracted section H–H :

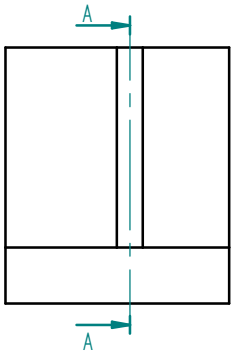


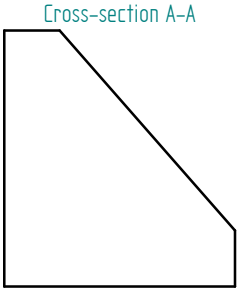
extracted
section H–H

Last name : First name : Group :

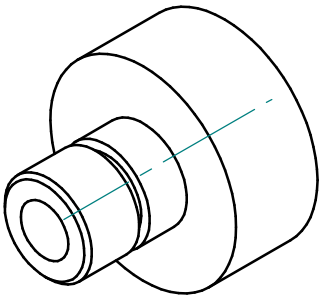
3 – Complete the cross-section A–A :

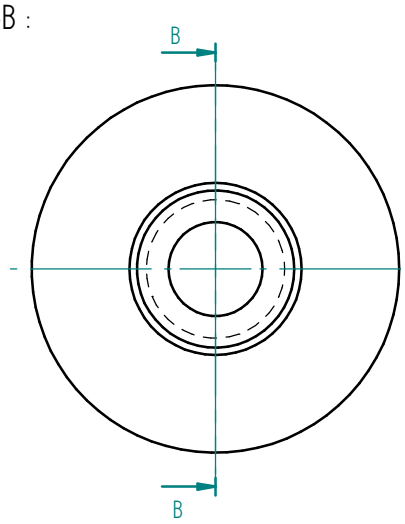


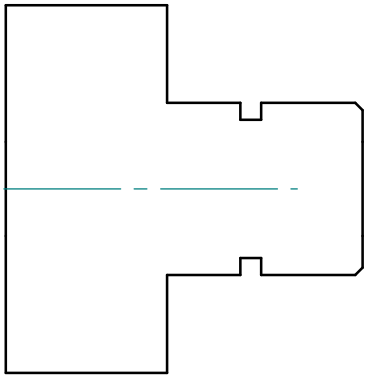




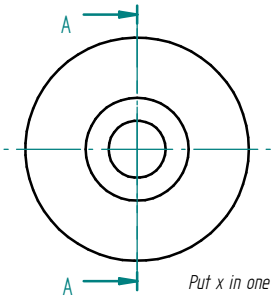
4 – Complete the half-section B–B :



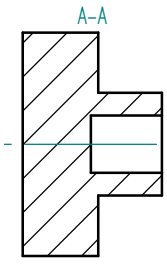




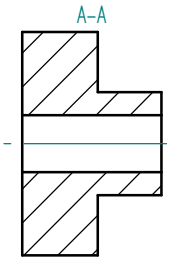
5 – Choose among the views below, which one represents a possible cross-section compatible with the A–A cutting plane (more than one answer possible):



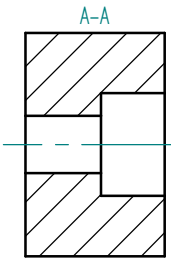
Put x in one or more boxes



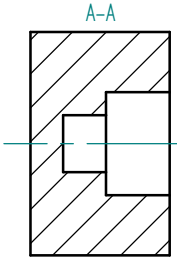
☐



☐

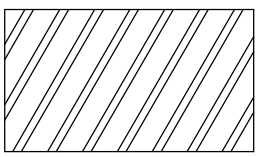


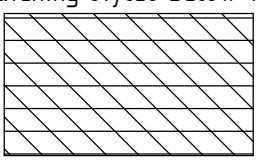
☐

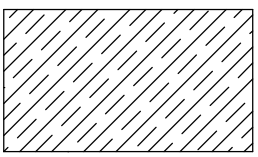


☐

6 – Define materials associated with the hatching styles below ?



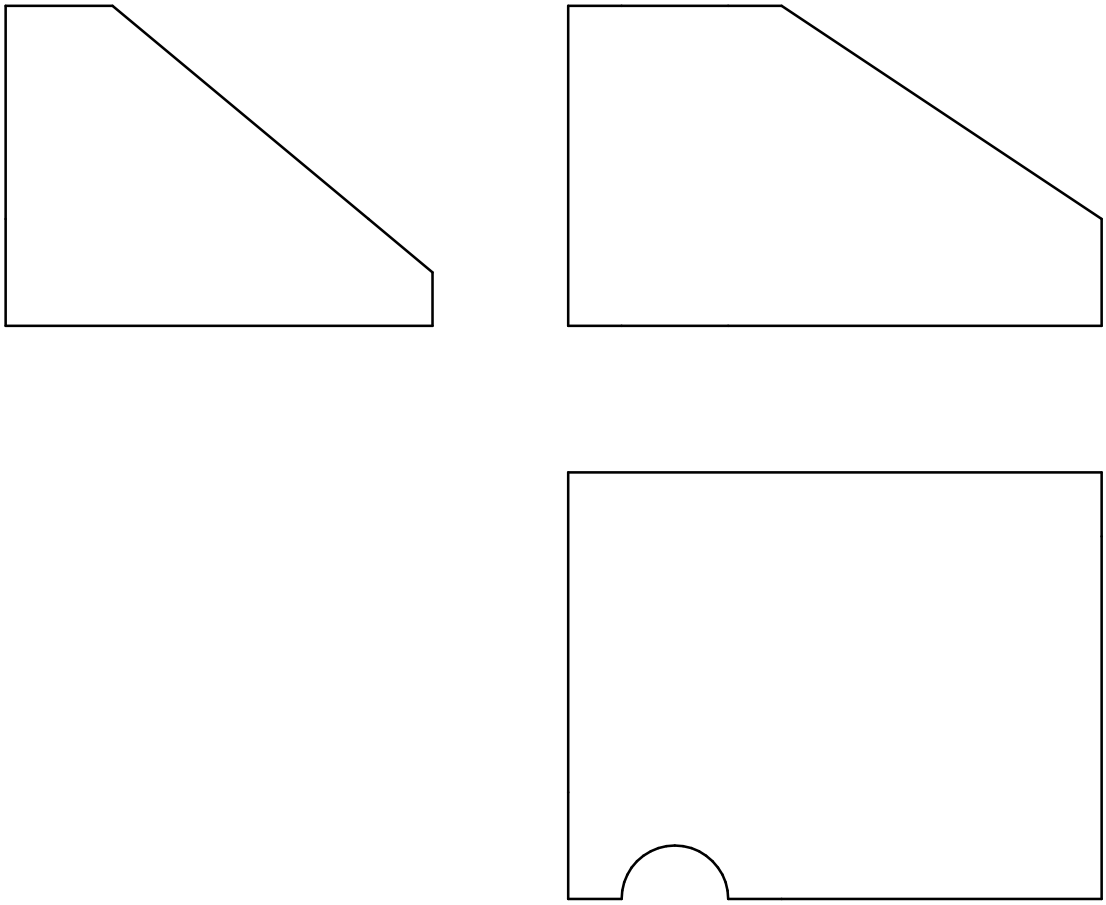




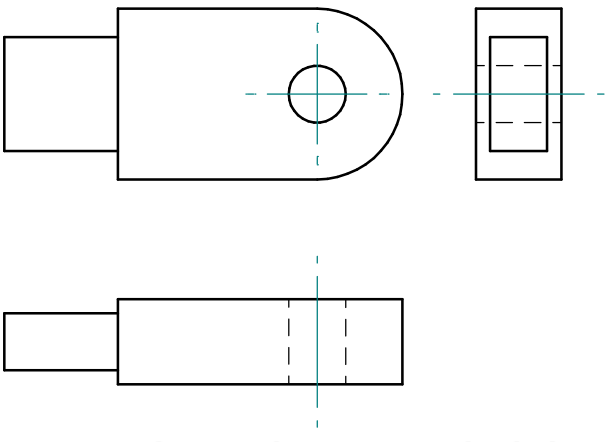
Answers : ....

Last name : First name : Group :

7 – Complete the three views below by adding all the missing hidden edges.



8– Draw a cavalier (oblique) projection of the part below. Do not draw hidden edges.



perspective drawing