

Communication Graphique

Séance de travaux pratiques :
Plans et cotations

Alex Bolyn – 6 octobre 2025

Objectifs de la séance

I. Plan et vues :

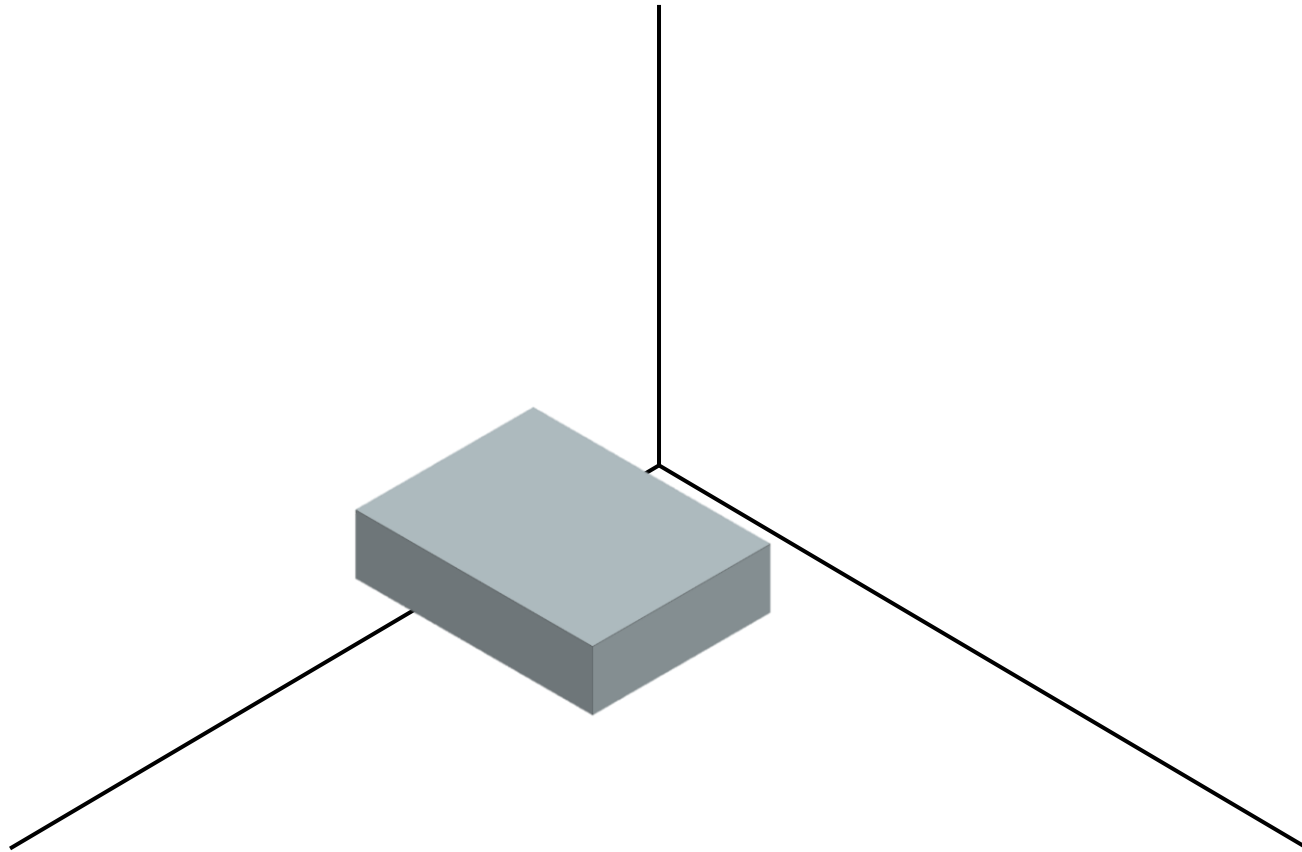
- Lire et appliquer la norme de projection européenne
- Comprendre les conséquences d'une projection
- Reconnaître les possibles ambiguïtés
- Déterminer et choisir les vues nécessaires à un plan

II. Cotation :

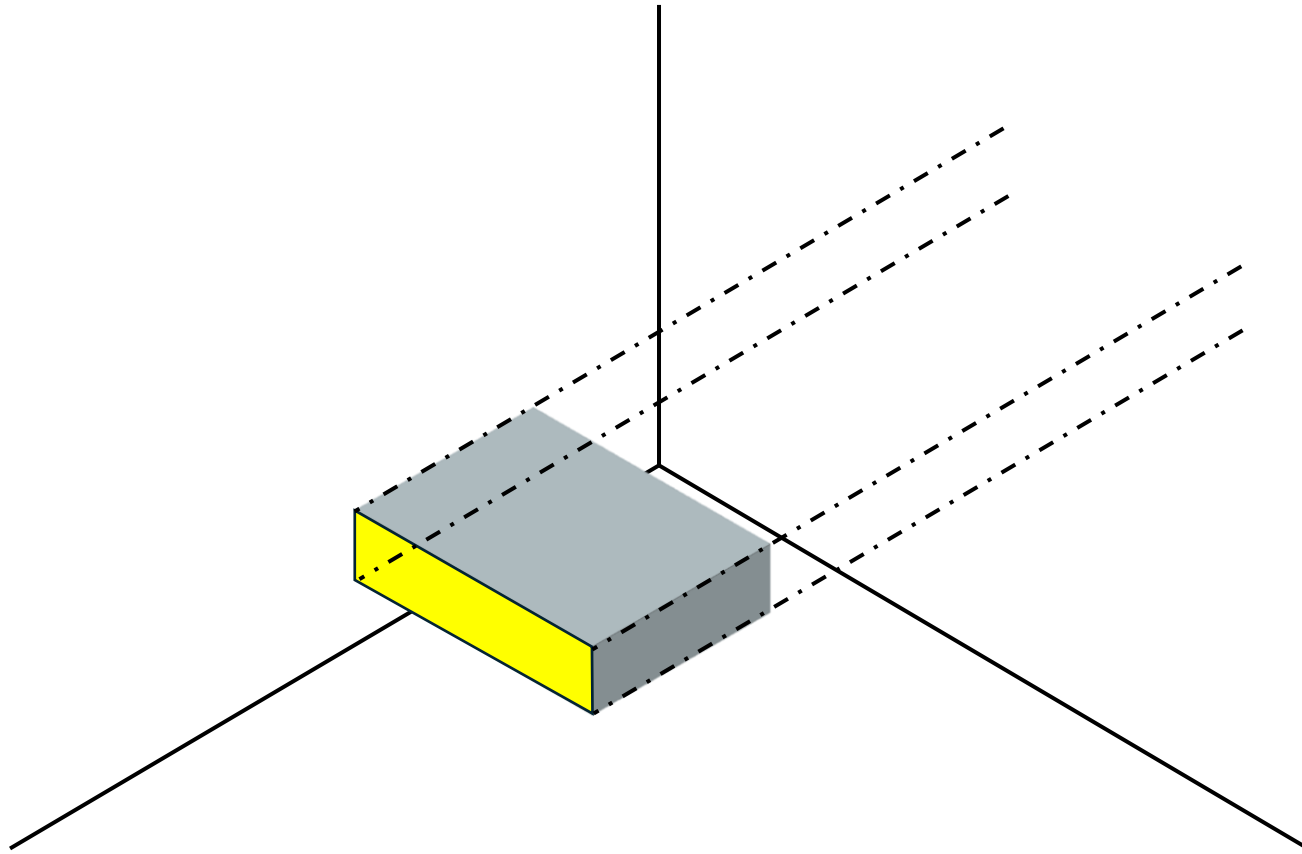
- Appliquer le concept de cotation fonctionnelle
- Comprendre ce qui détermine le choix d'une cote

I. Plan et vues

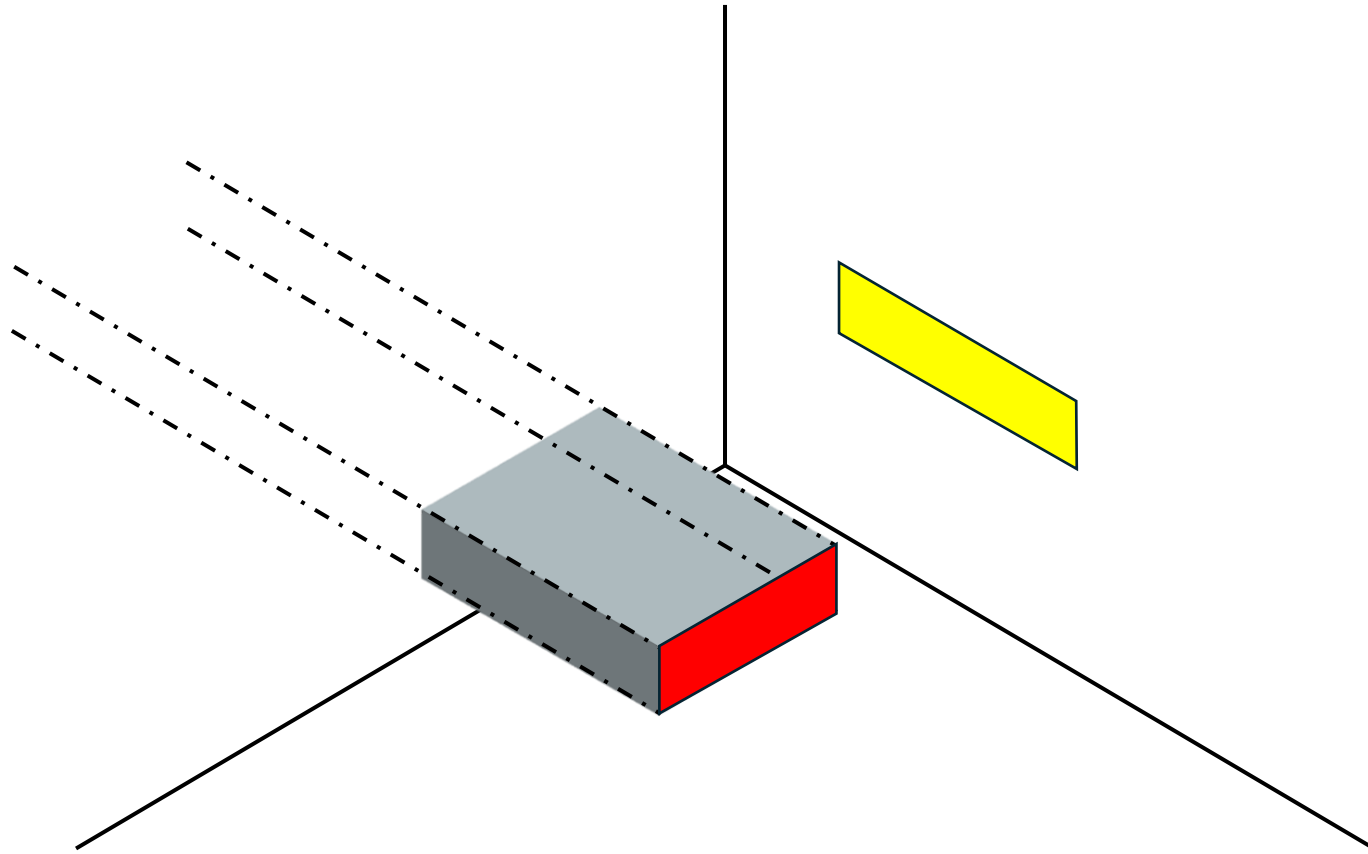
Rappel : norme européenne



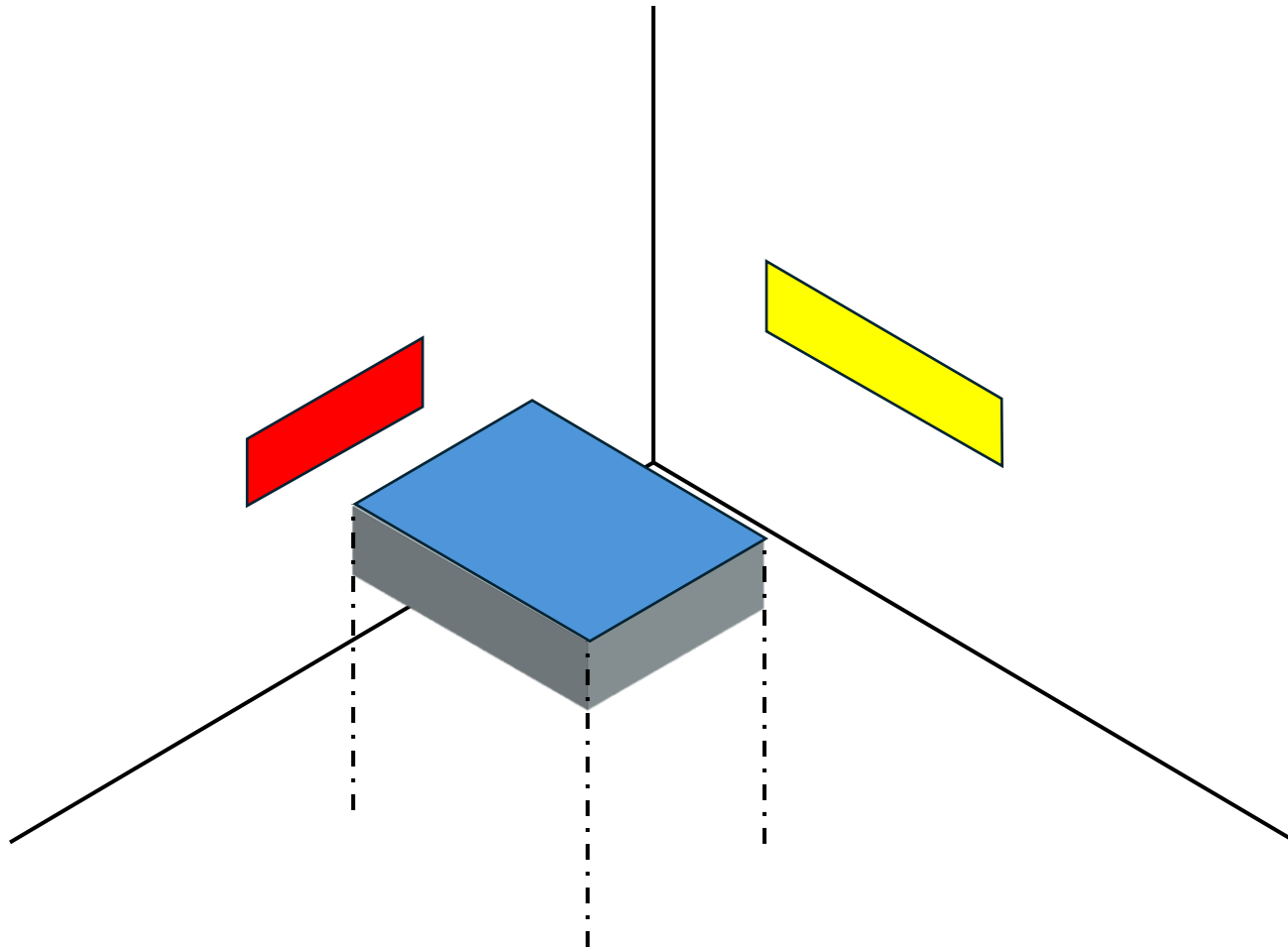
Rappel : norme européenne



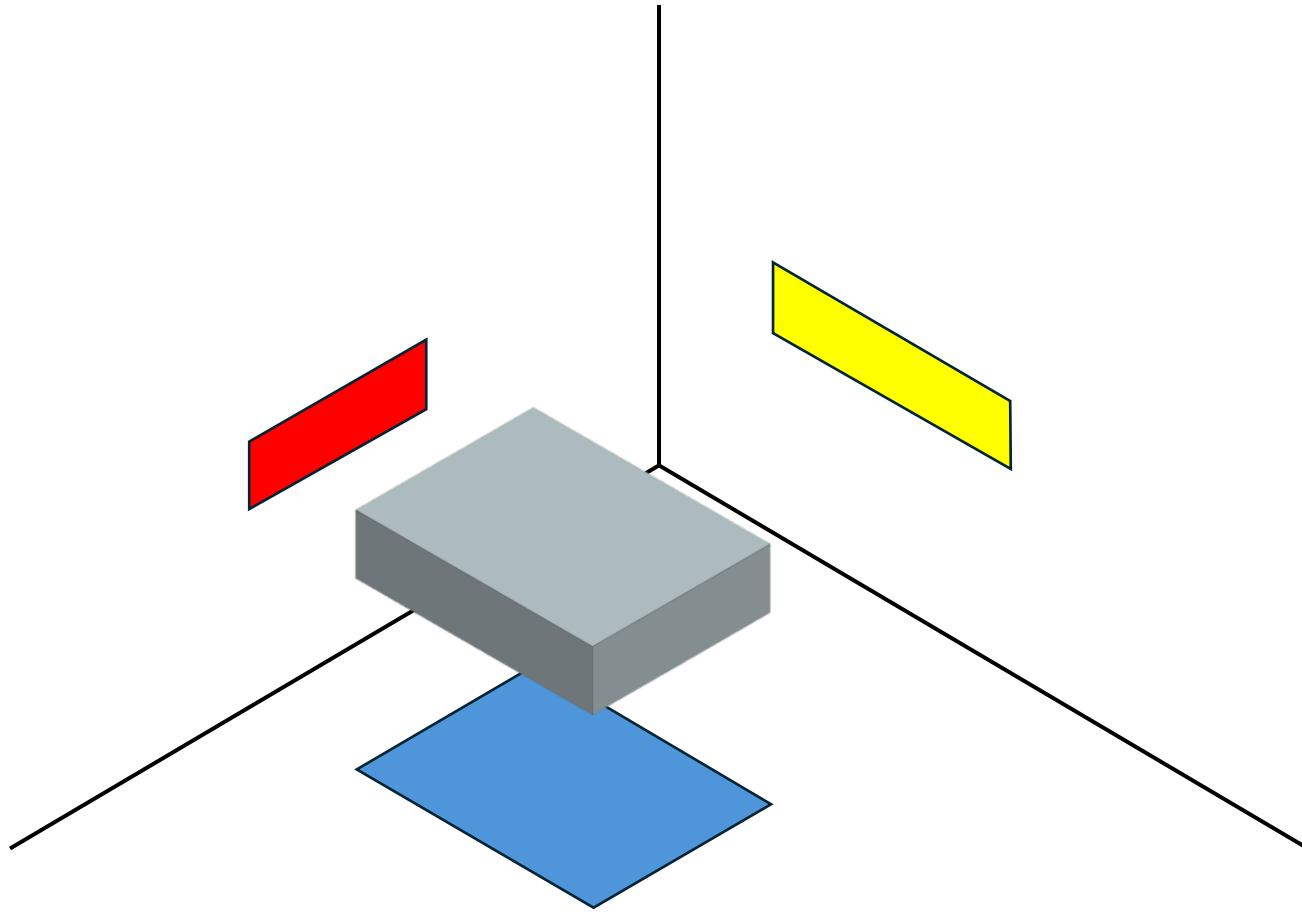
Rappel : norme européenne



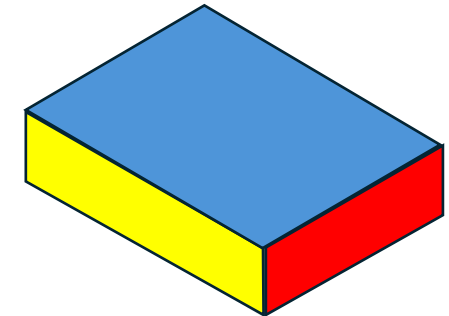
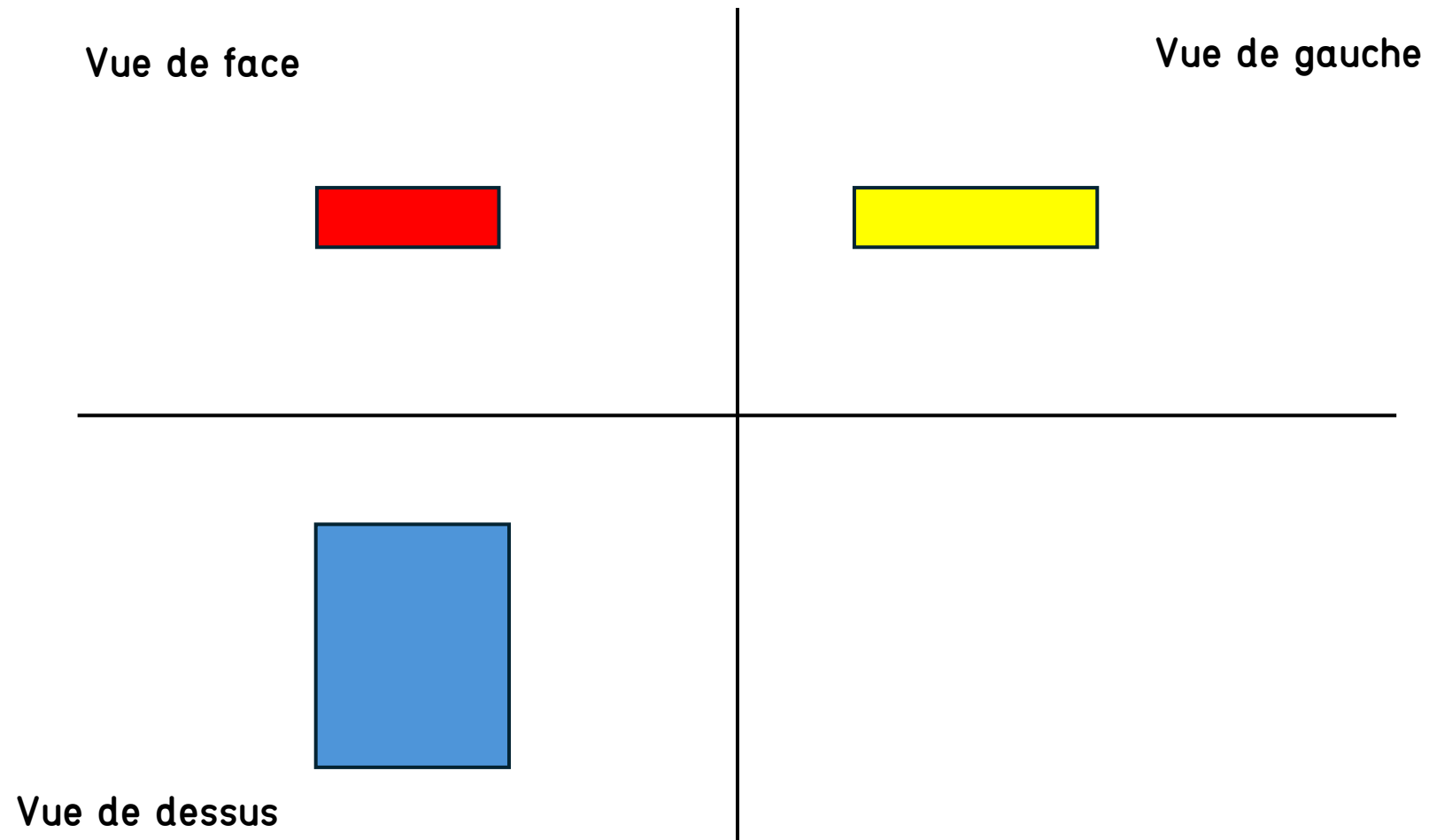
Rappel : norme européenne



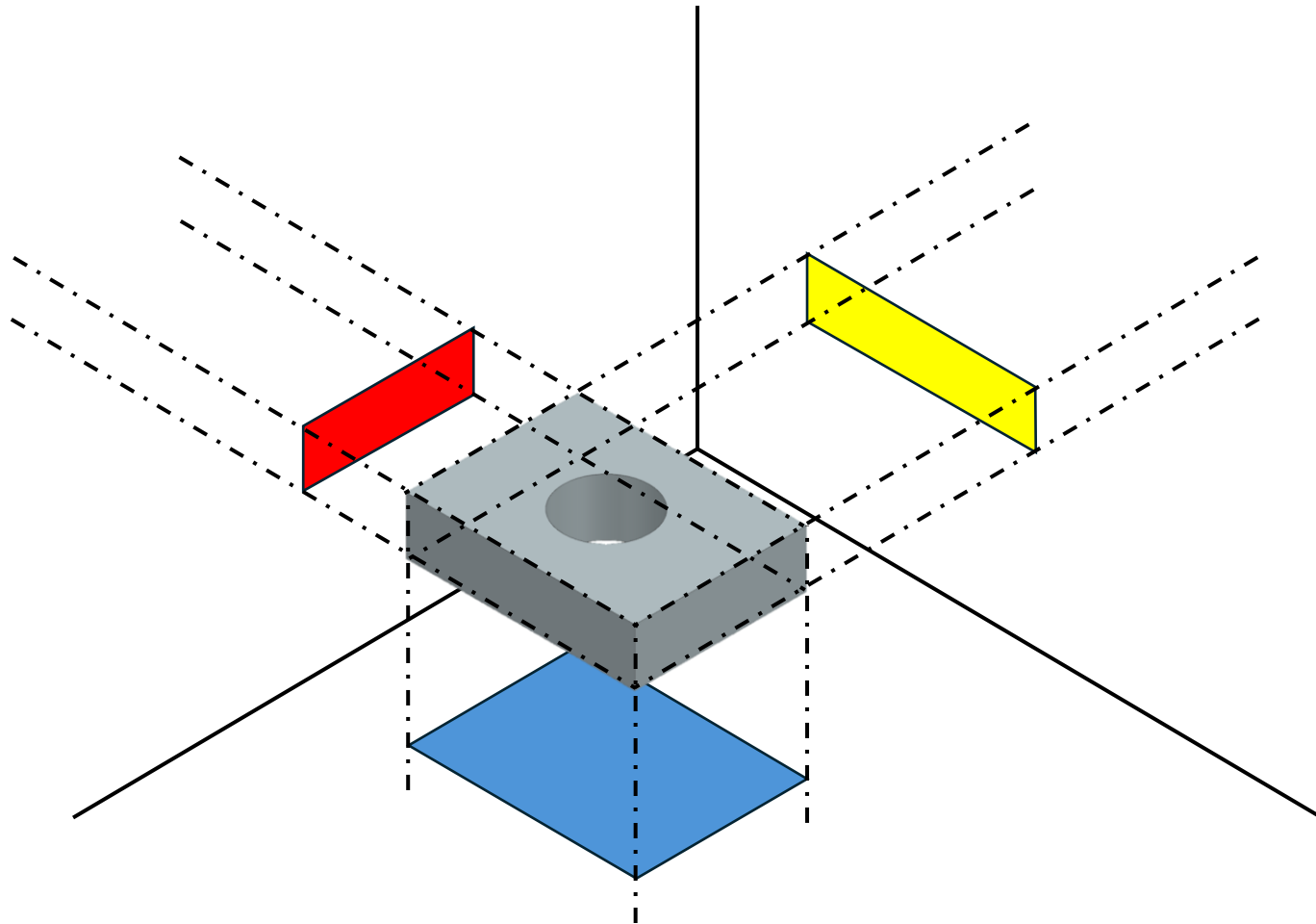
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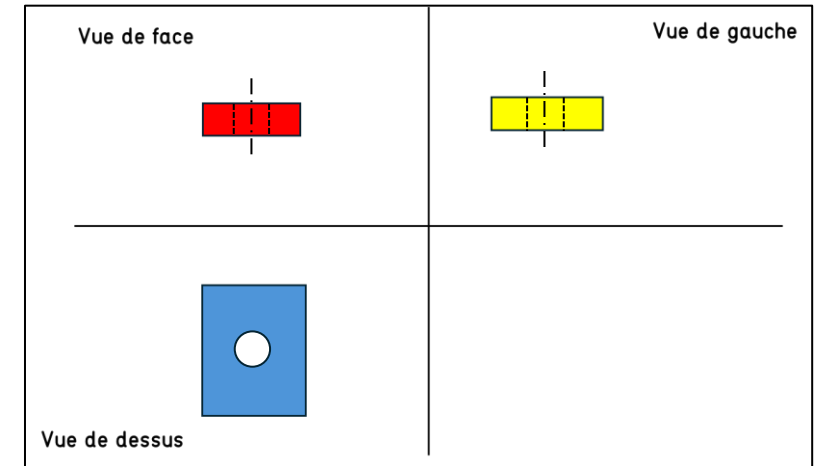
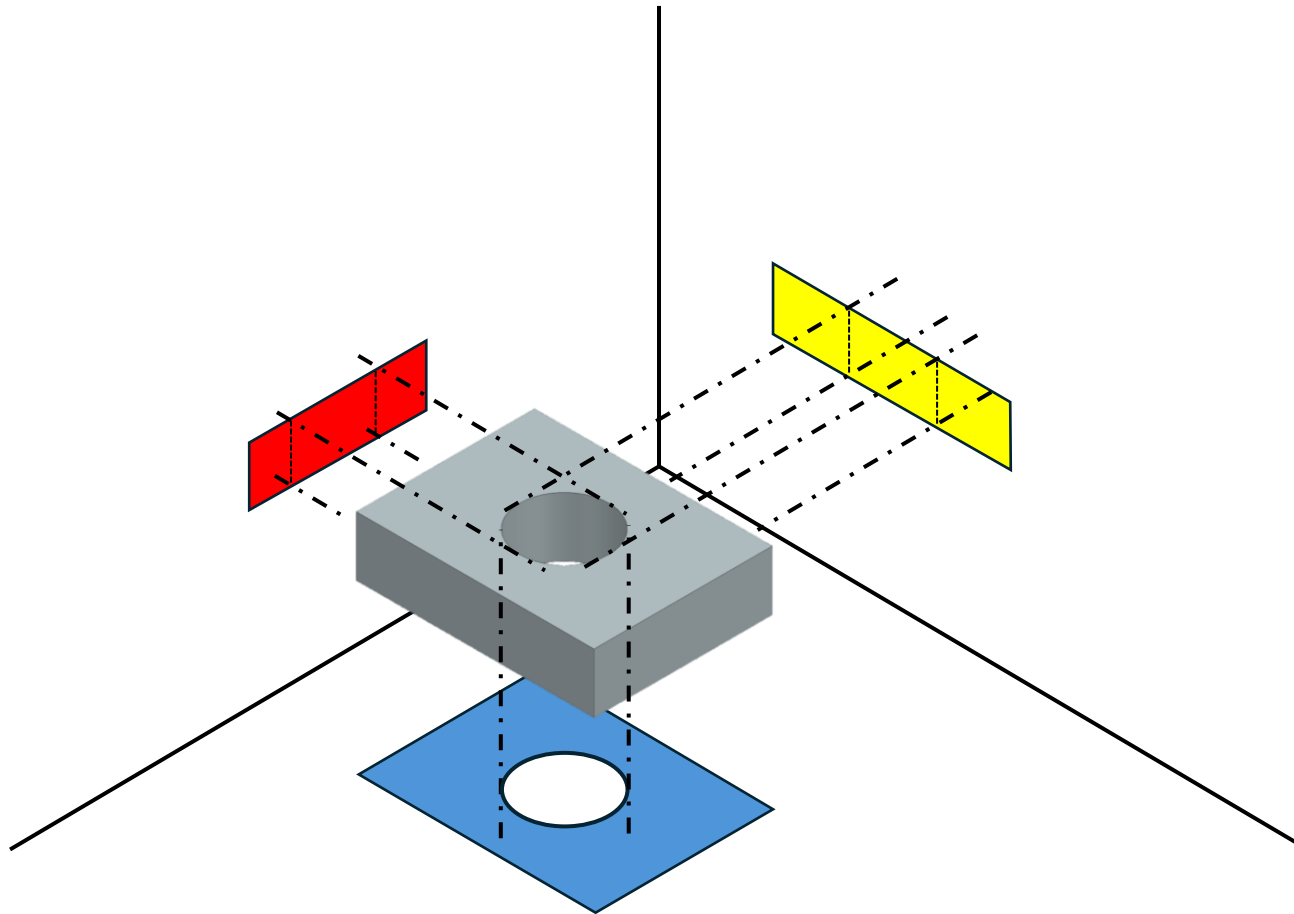
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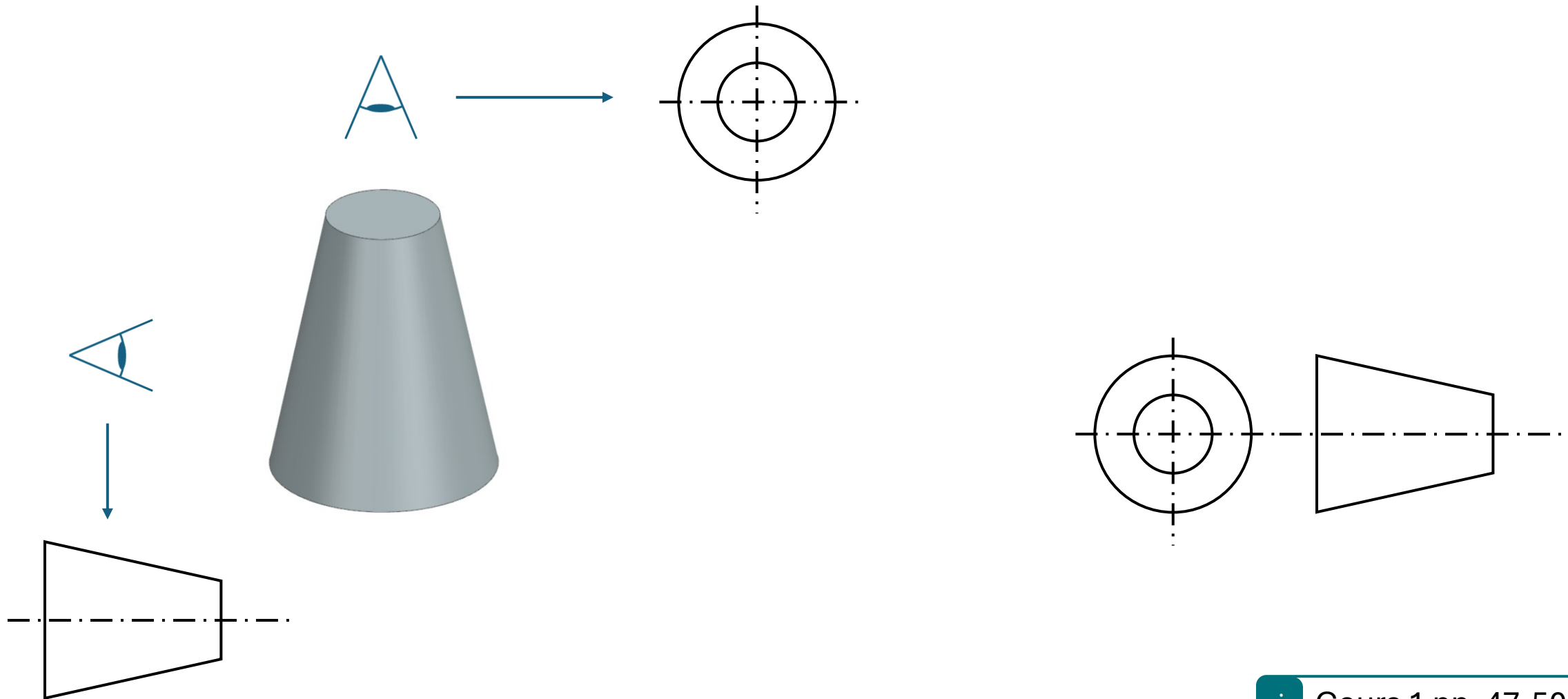
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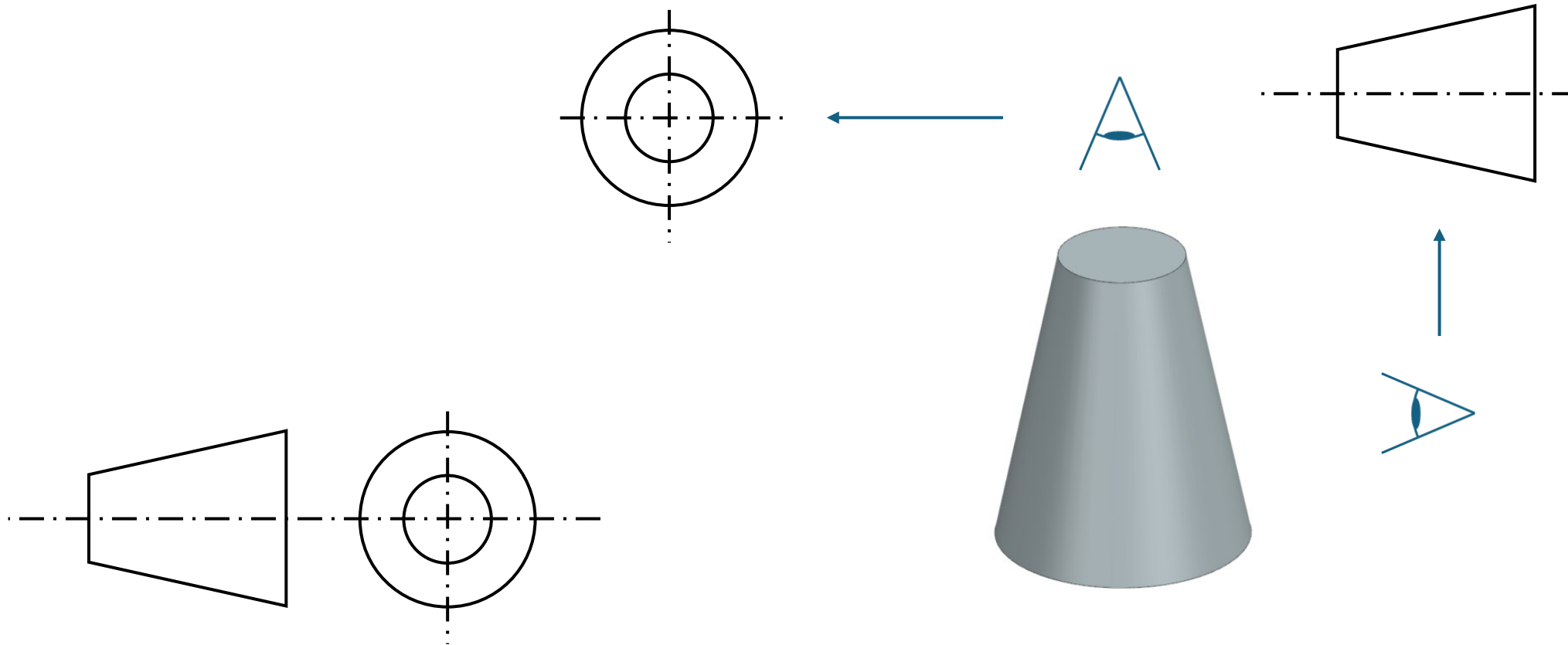
Rappel : norme européenne



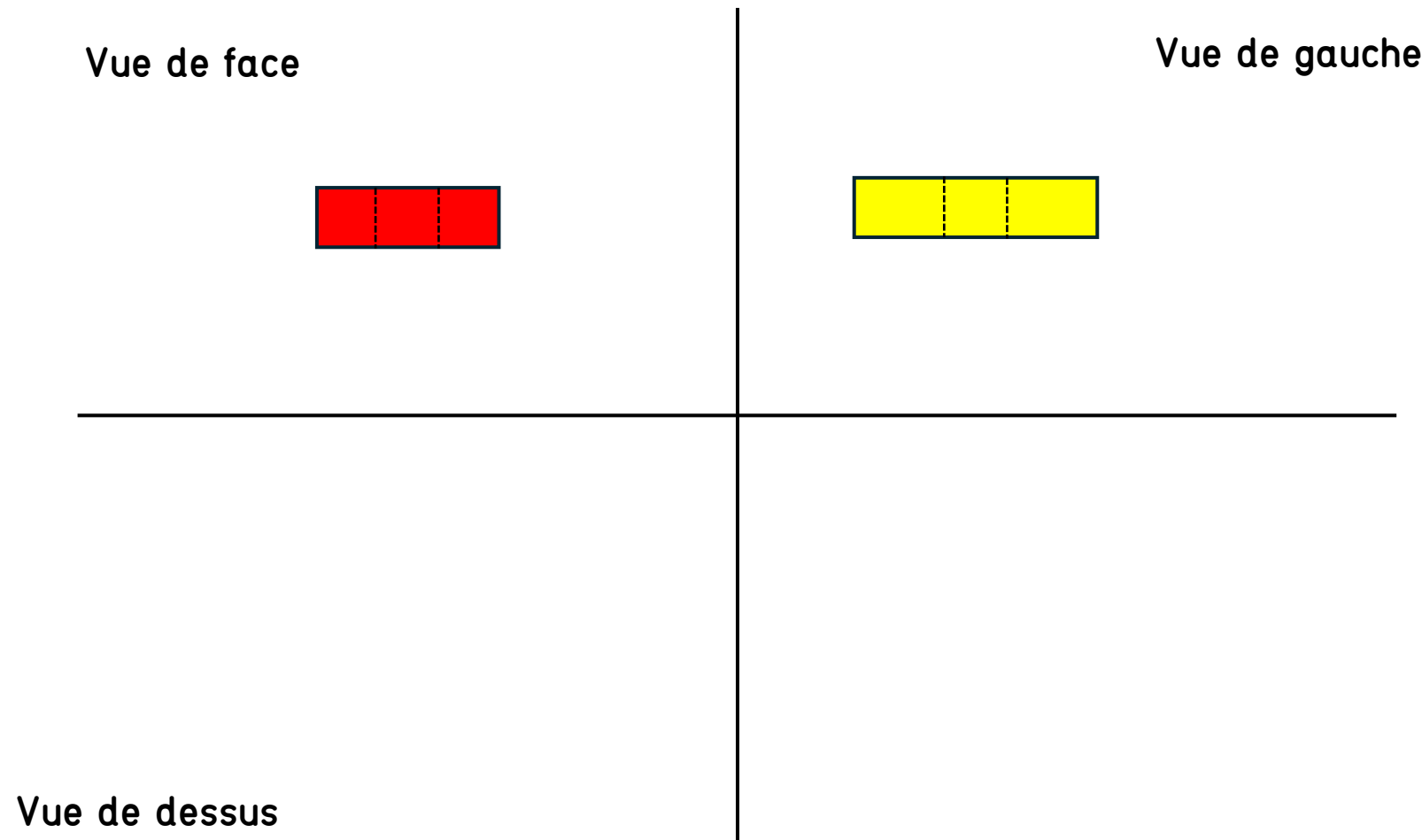
Rappel : norme européenne



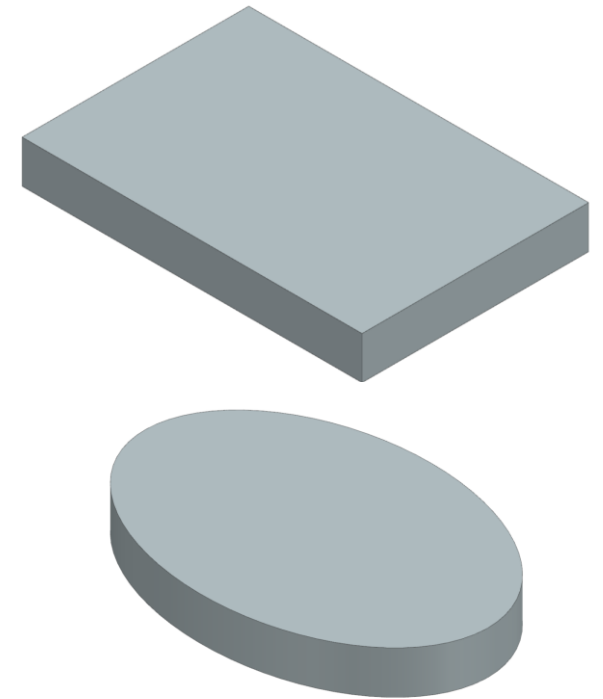
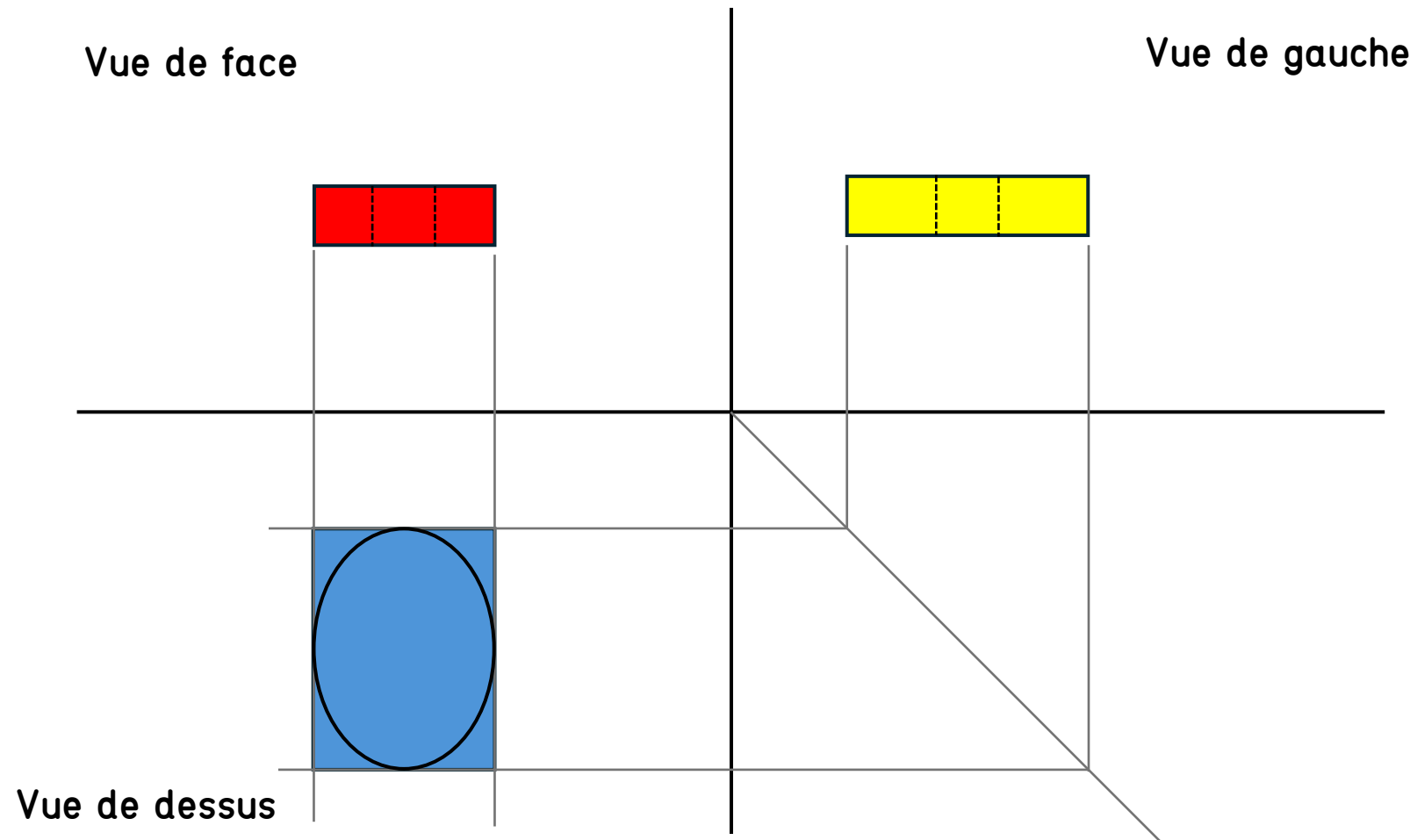
Rappel : norme européenne



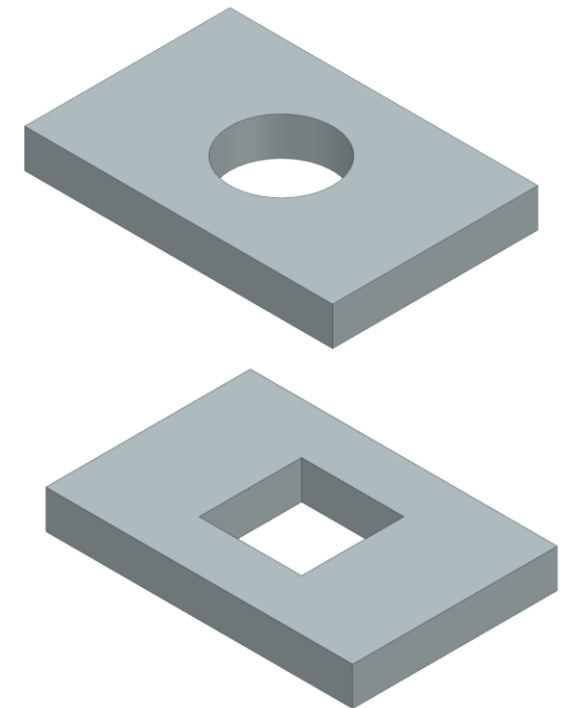
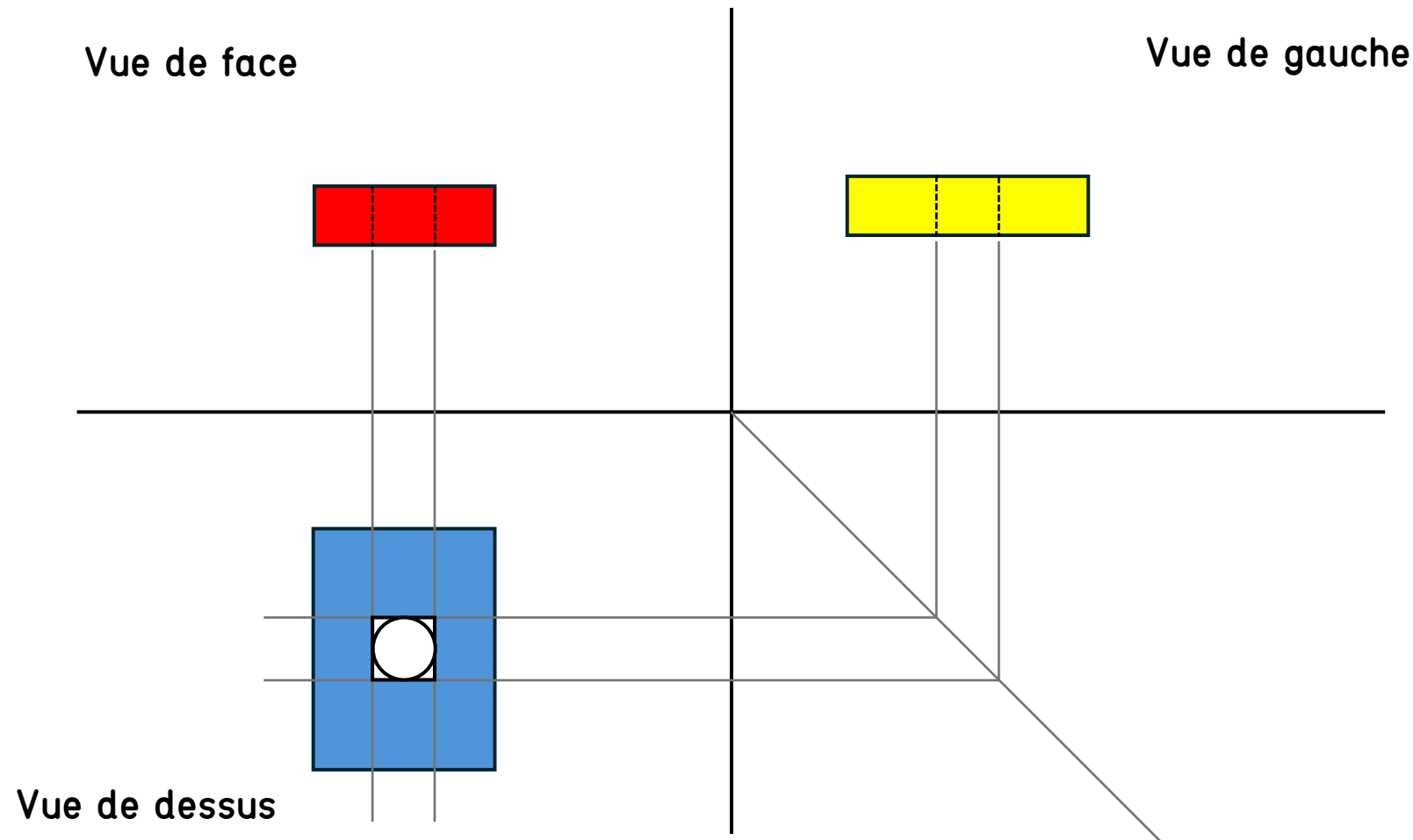
Rappel : les “dangers” de la projection



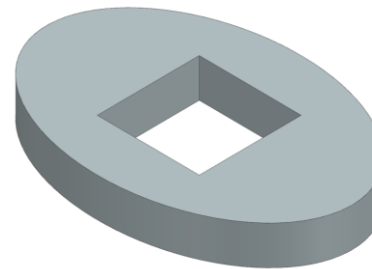
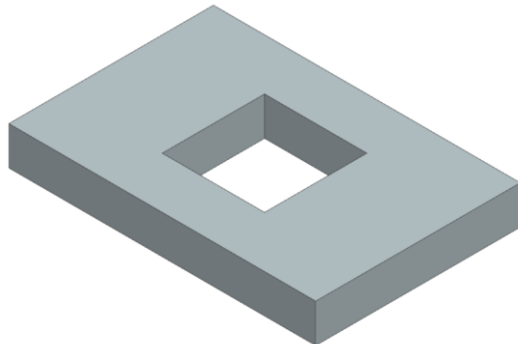
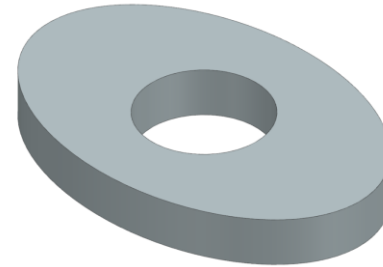
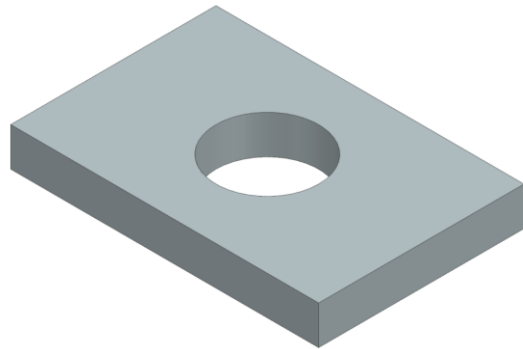
Rappel : les "dangers" de la projection



Rappel : les "dangers" de la projection

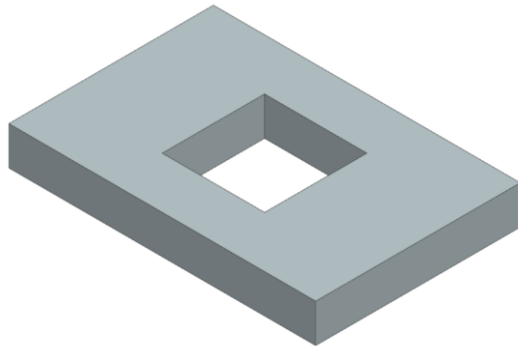
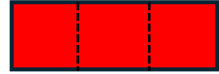


Rappel : les “dangers” de la projection



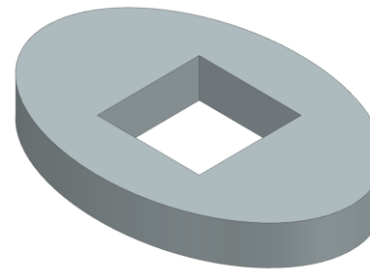
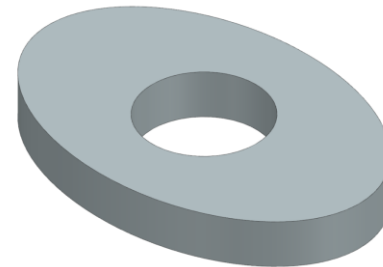
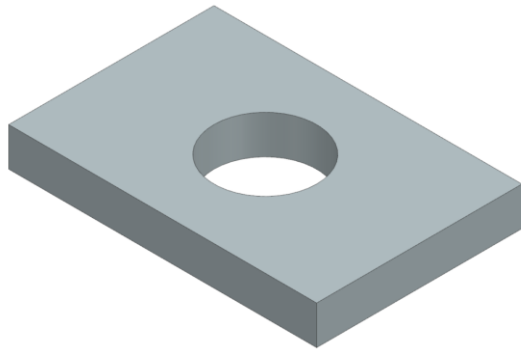
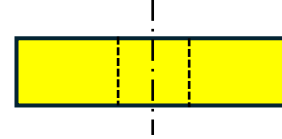
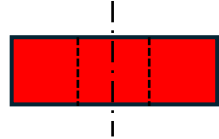
Rappel : les “dangers” de la projection

Aide de la norme !

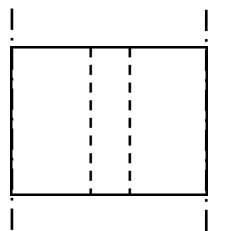
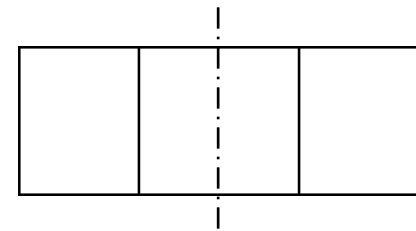
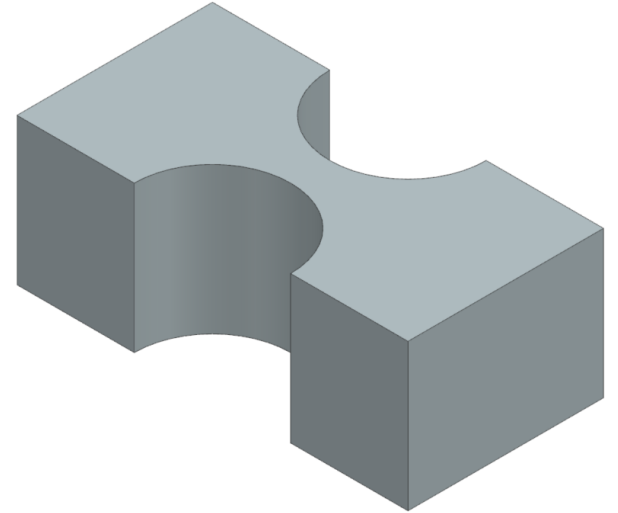
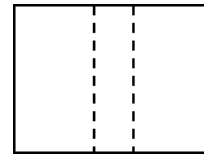
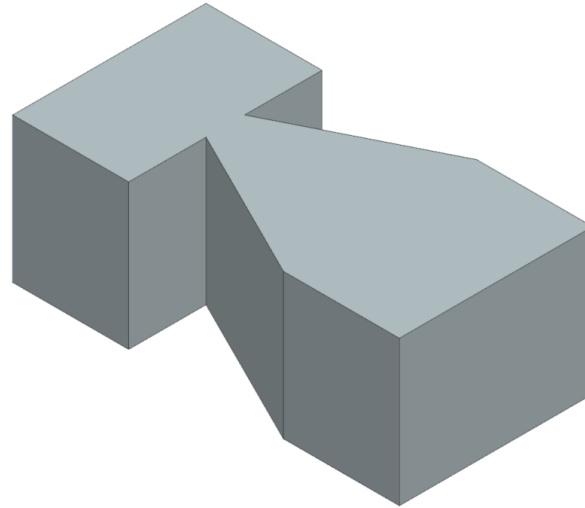
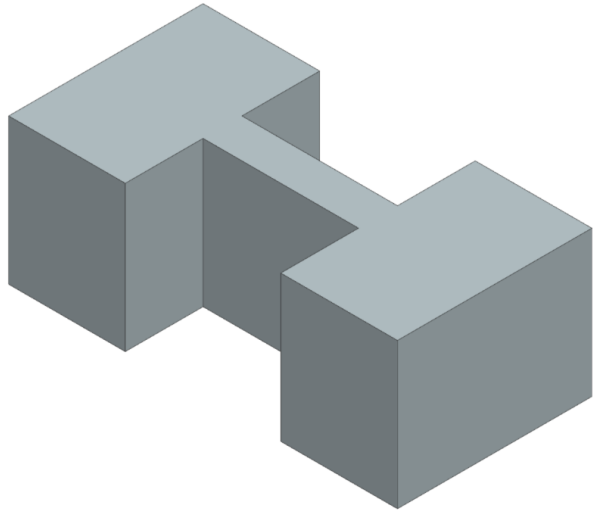


Rappel : les "dangers" de la projection

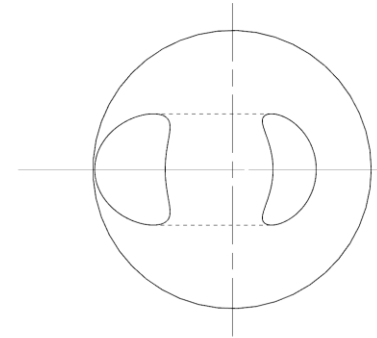
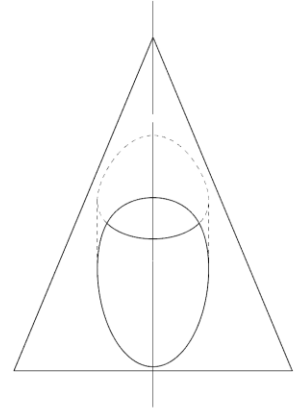
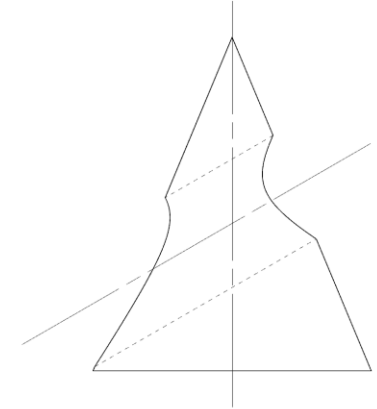
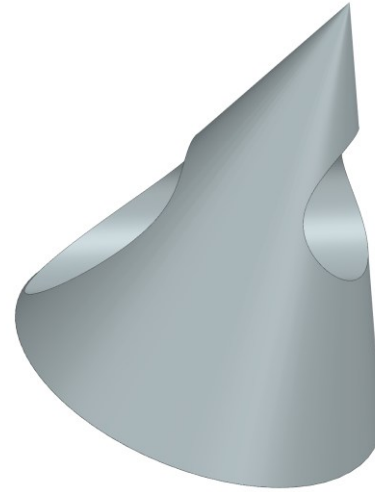
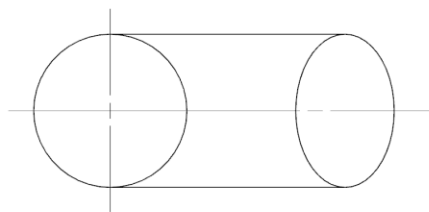
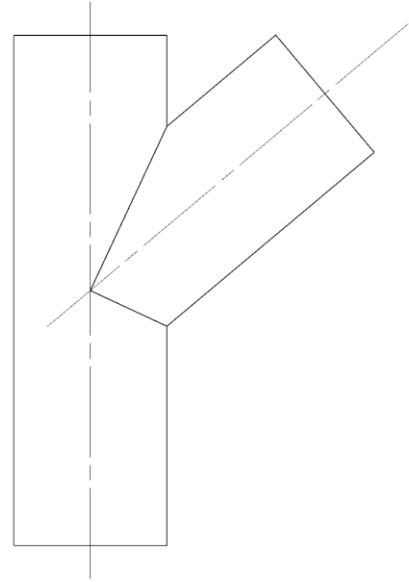
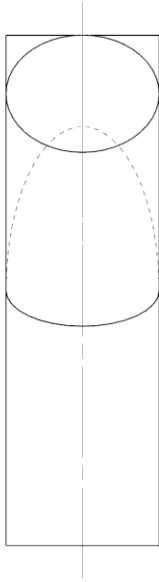
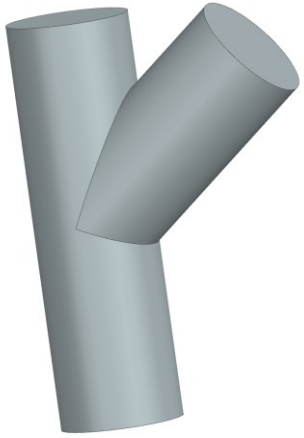
Aide de la norme !



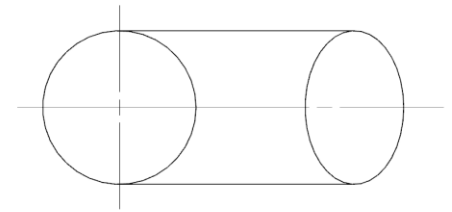
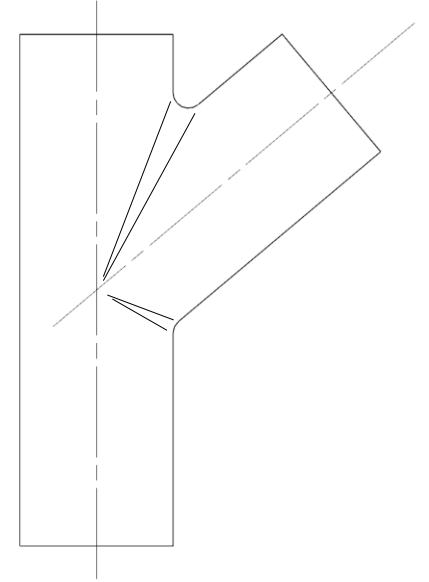
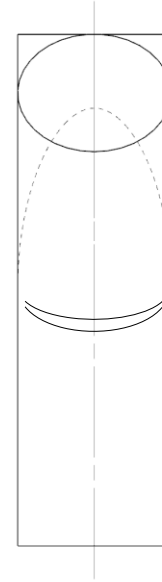
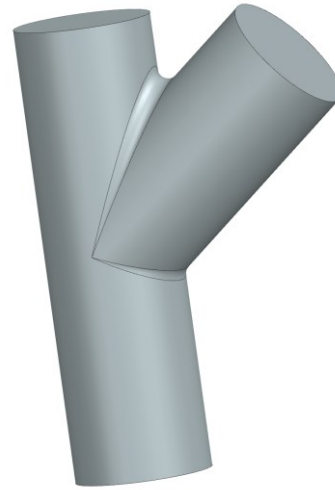
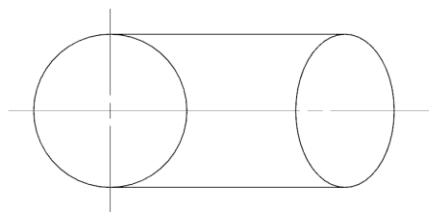
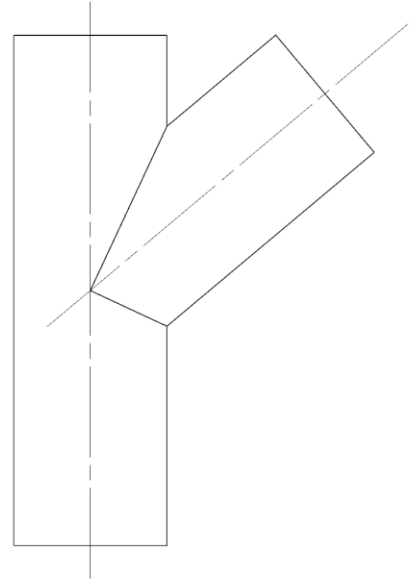
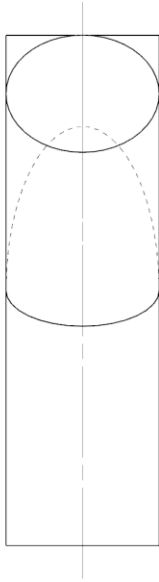
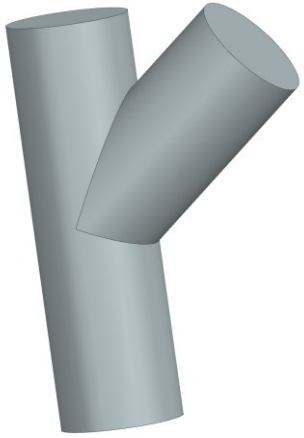
Rappel : les "dangers" de la projection



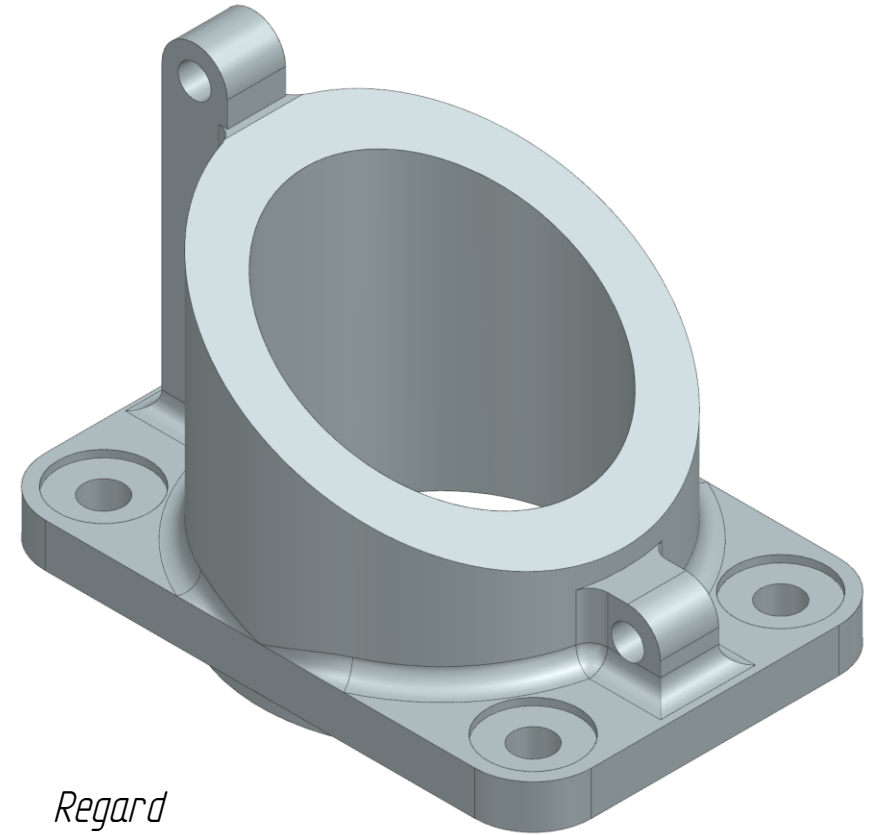
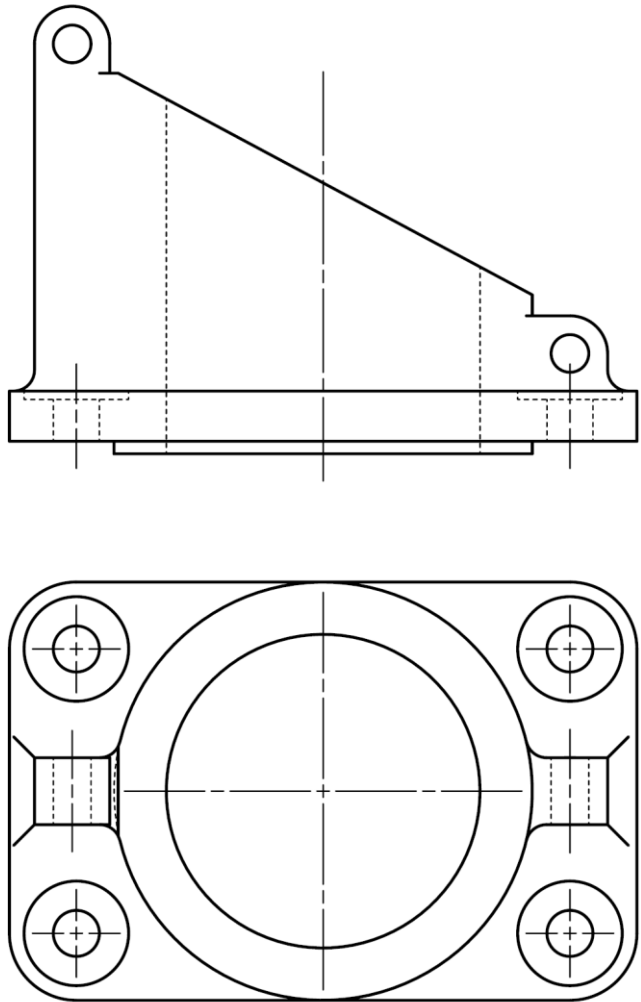
Rappel : les “dangers” de la projection



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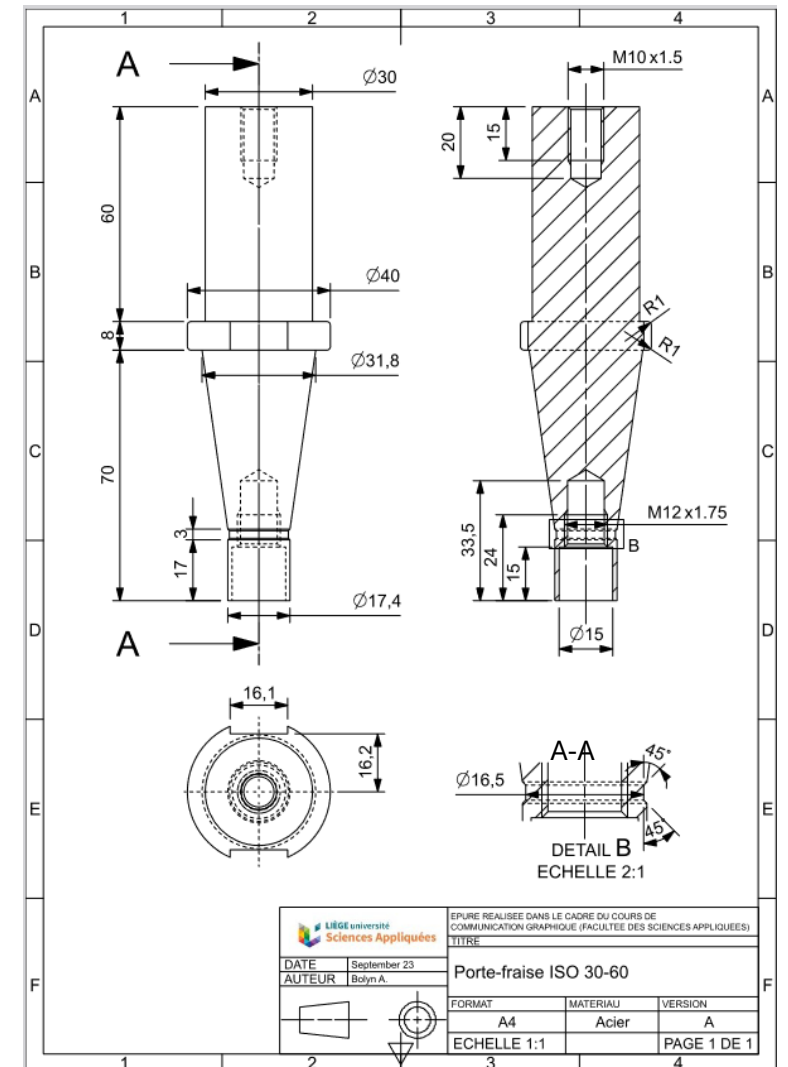
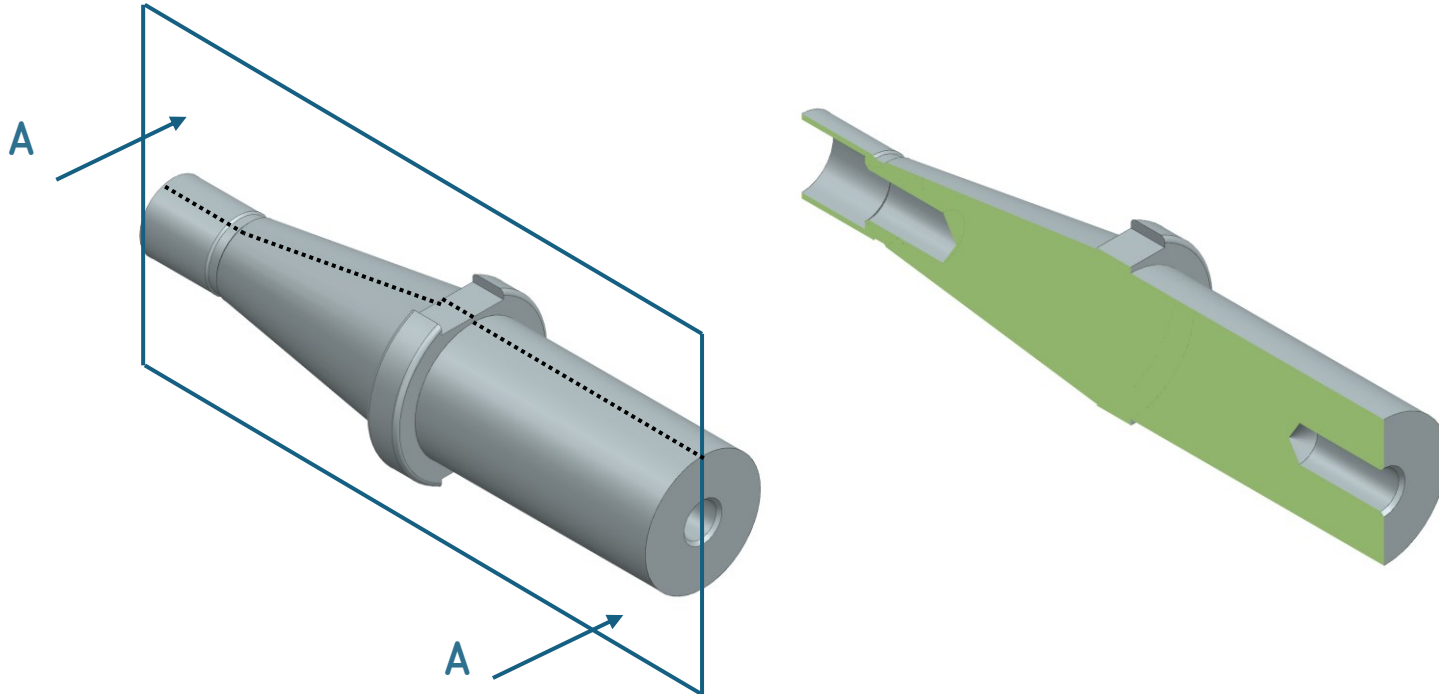


Regard

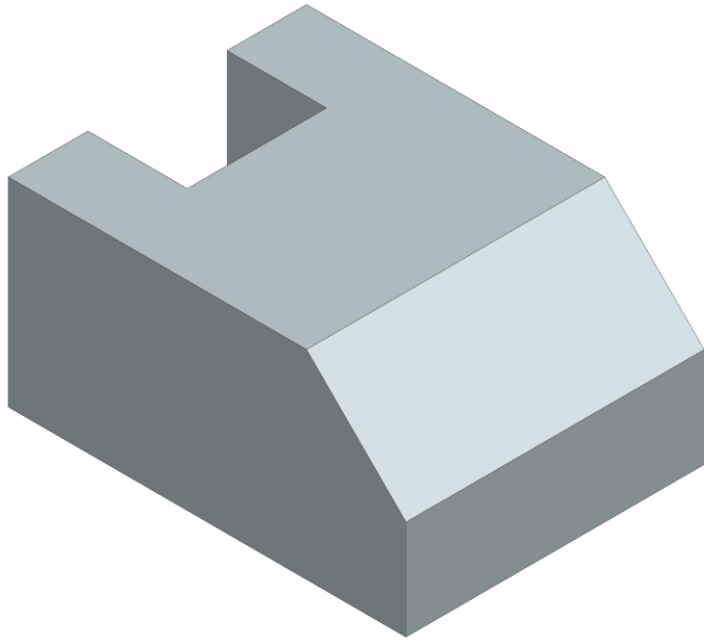
i

Cours 1 pp. 65-67
et pp.79-80

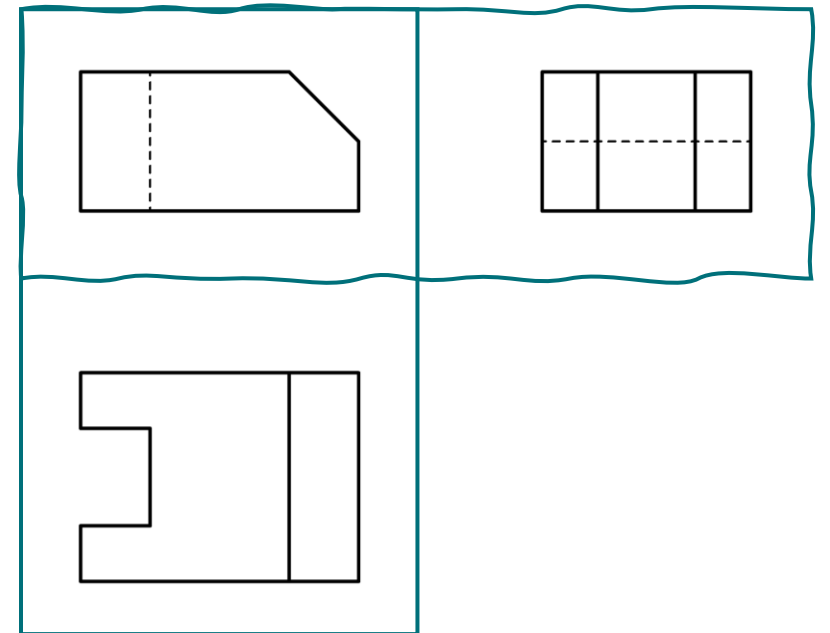
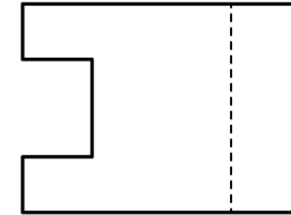
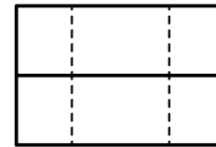
Rappel : coupes et sections



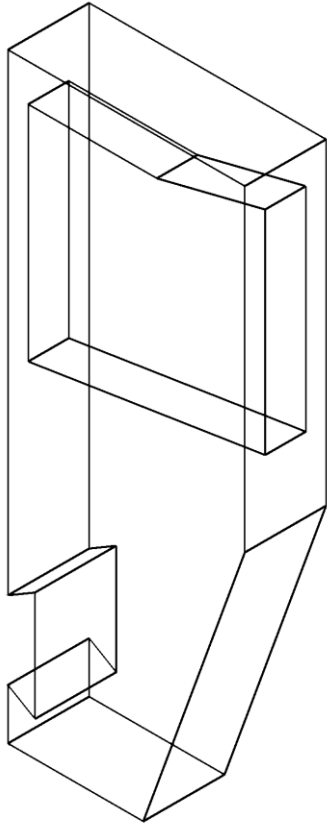
Exercice – *Quelles vues sont utiles ?*



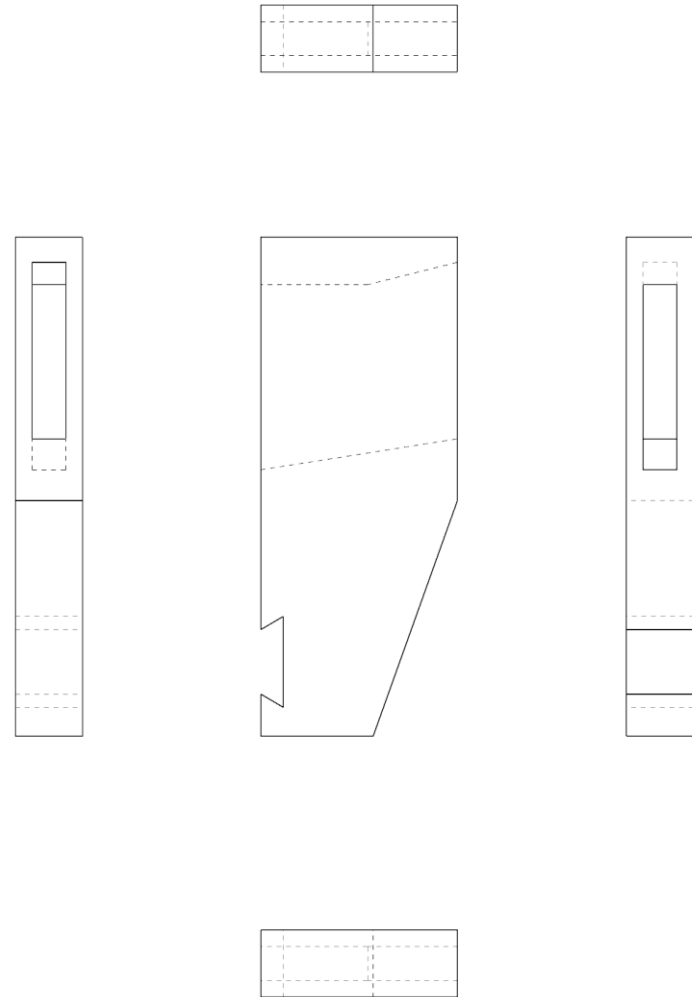
Sabot chanfreiné



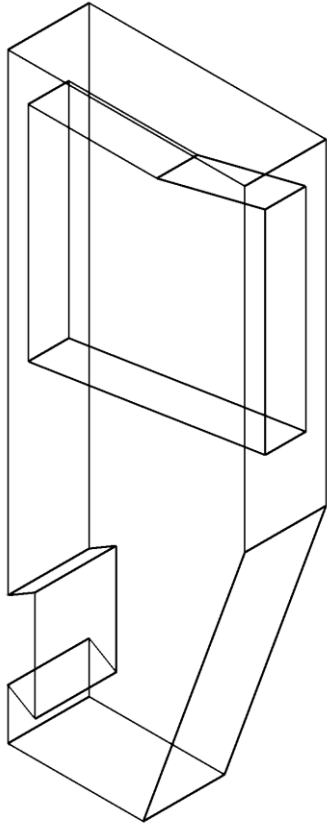
Exercice – *Quelles vues sont utiles ?*



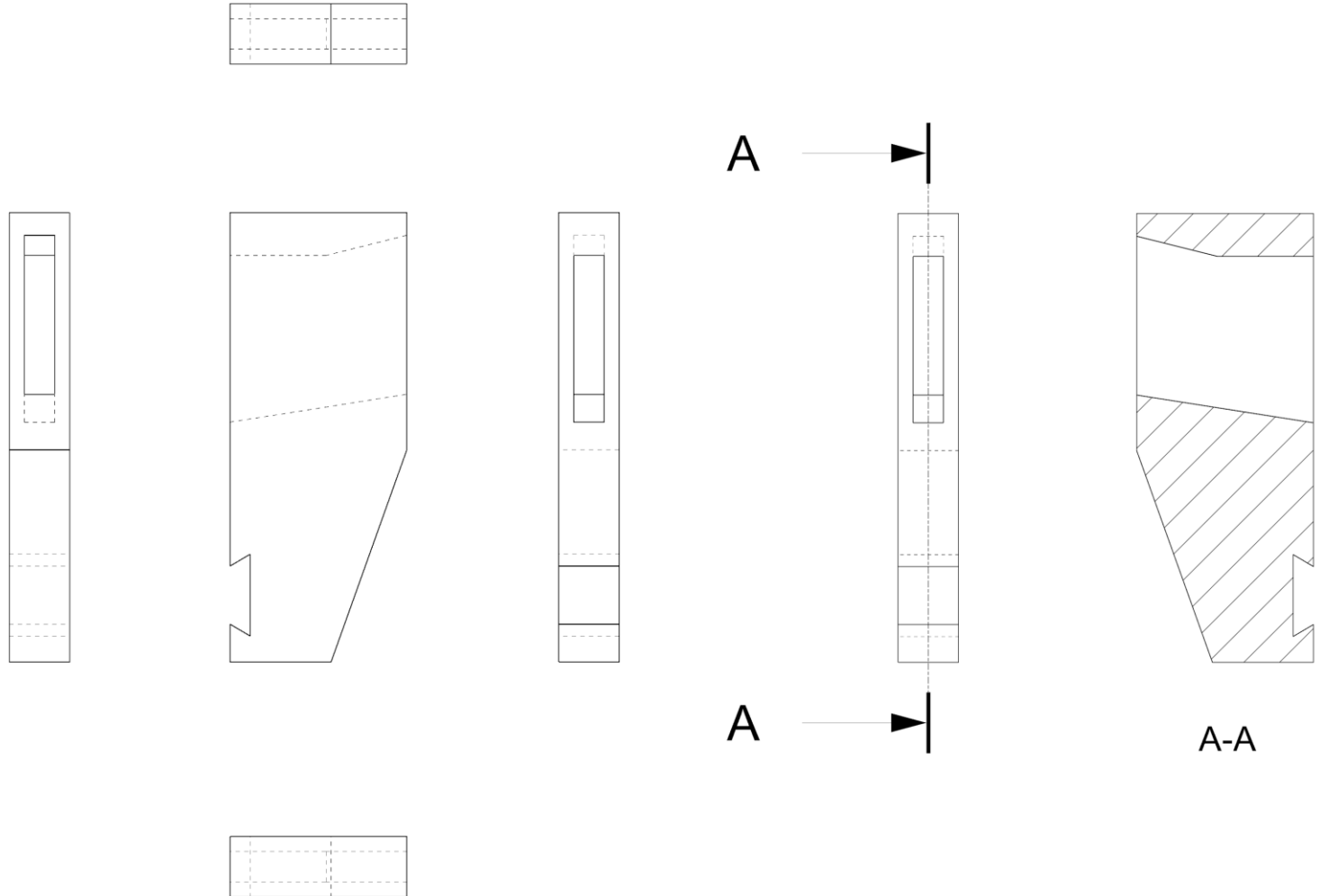
Machoire à crémaillère



Exercice – *Quelles vues sont utiles ?*



Machoire à crémaillère



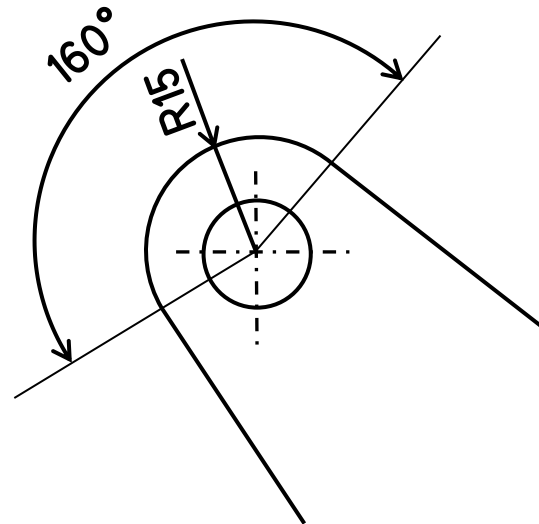
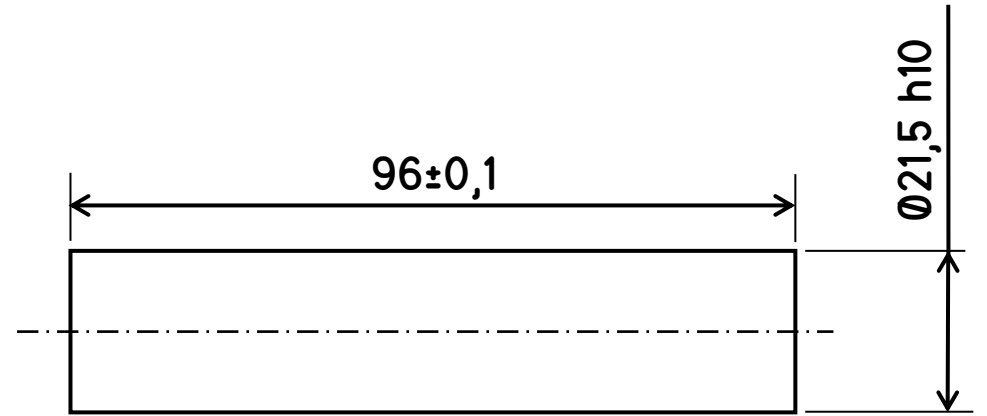
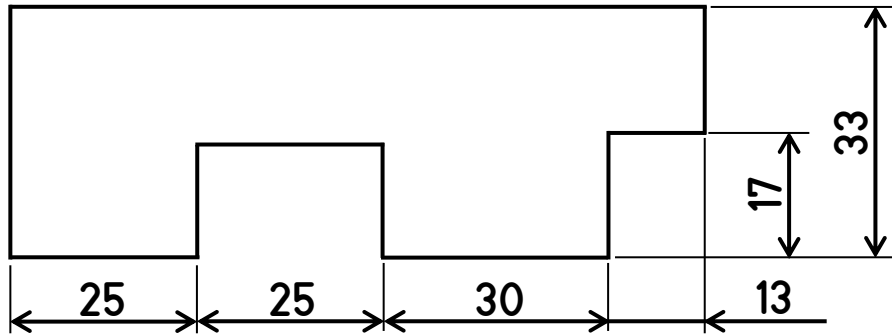
Exercice – *Quelles vues sont utiles ?*



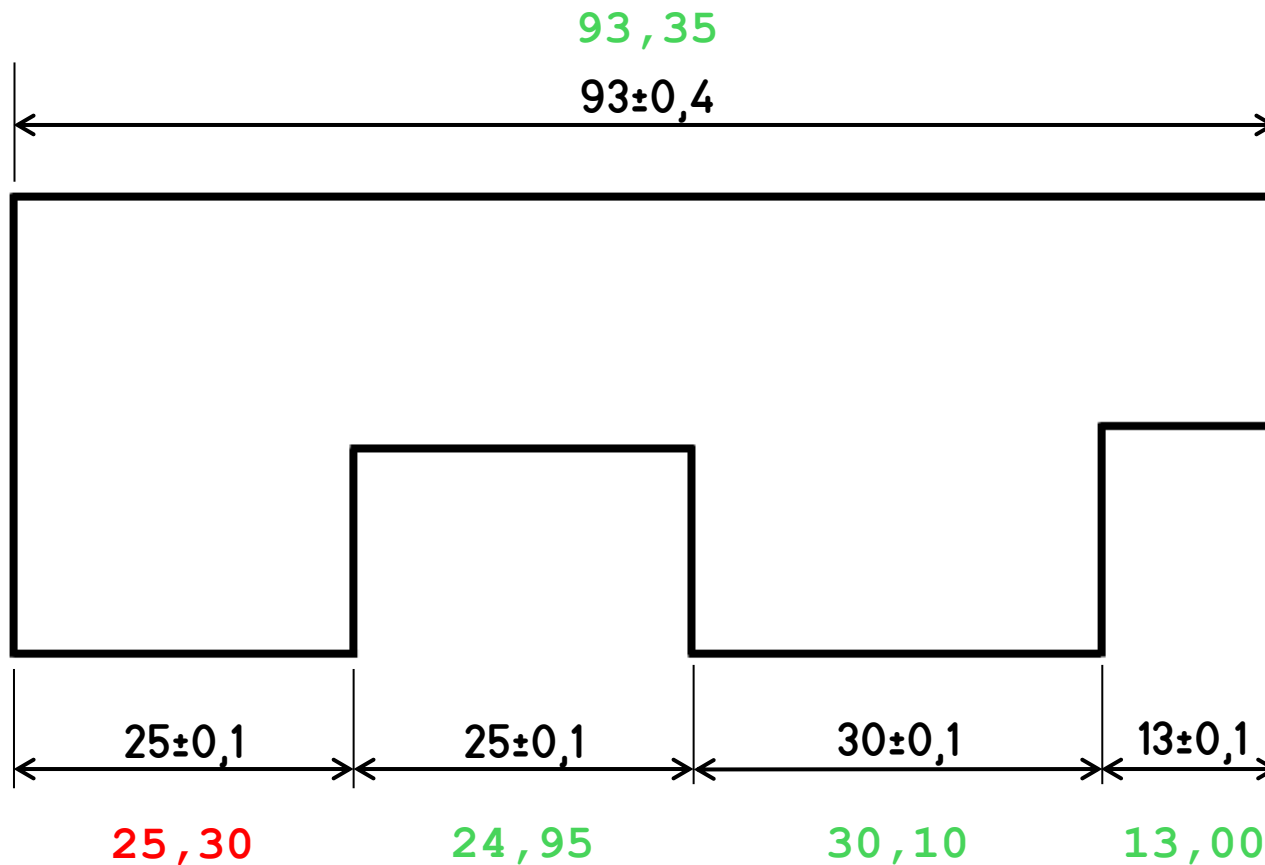
app.wooclap.com/COMGRAPH1

II. Cotation

Rappel : coter un plan



Rappel : coter de manière suffisante



Redondance !

Les tolérances respectées dépendront des opérations de fabrication !

Notion de cotes fonctionnelles.

Rappel : choisir une cote

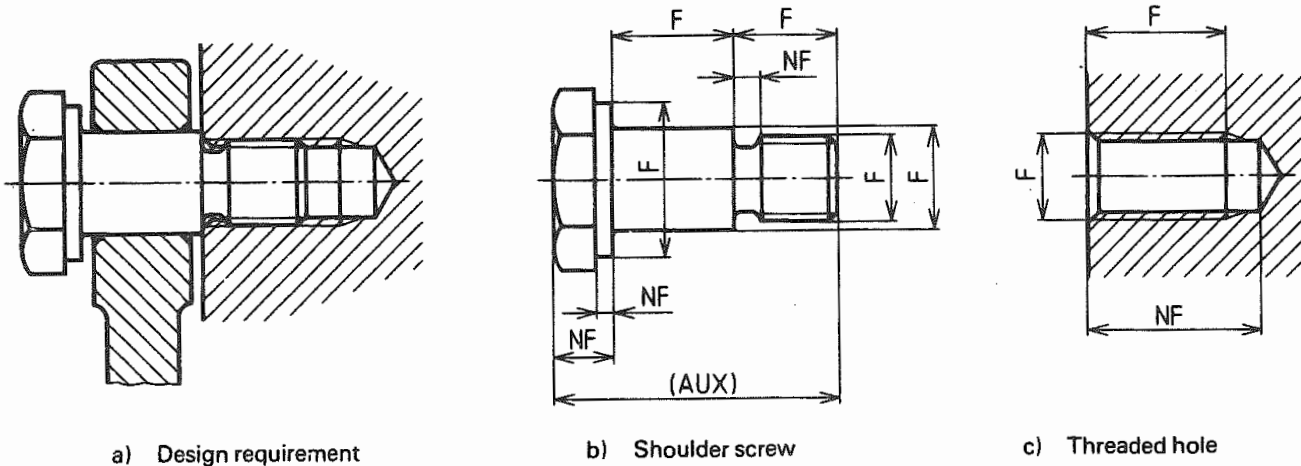


Figure 1 — Functional, non-functional and auxiliary dimensions ISO 129-1985

Priorité aux cotes fonctionnelles.

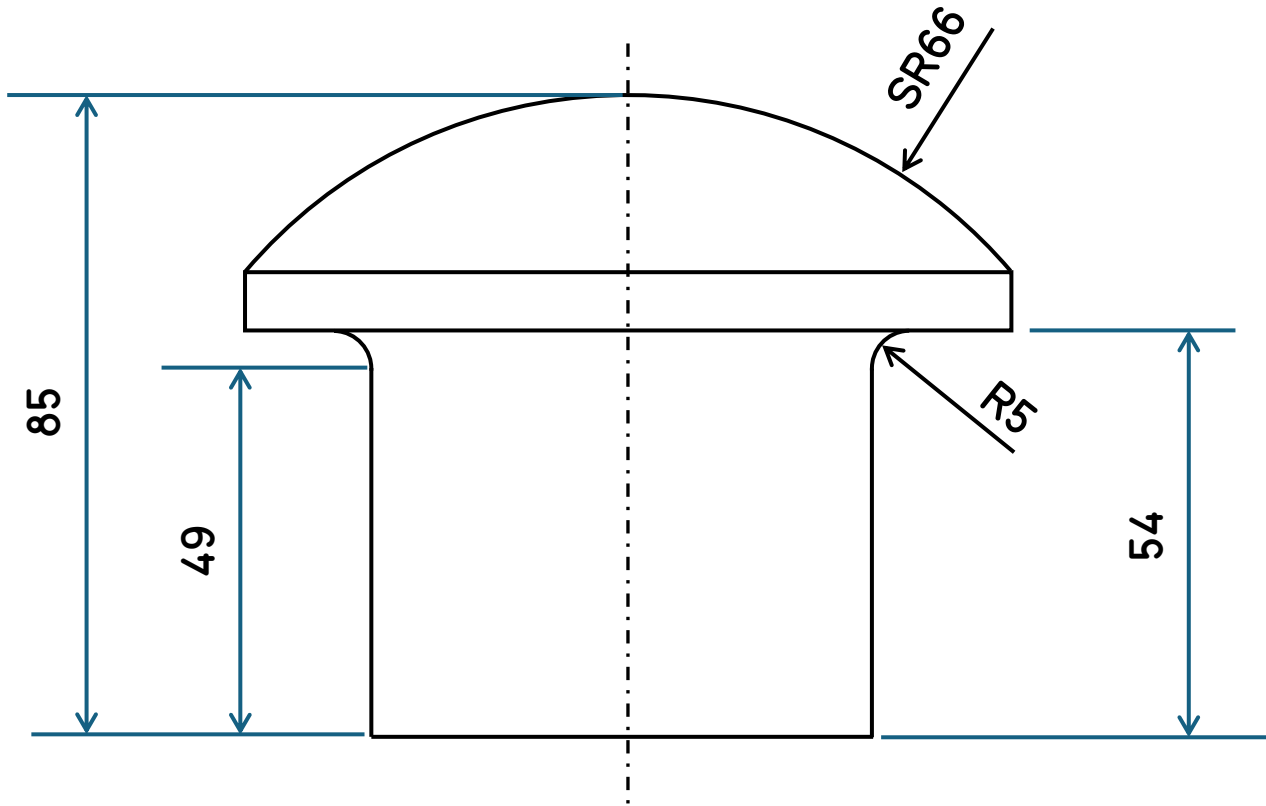
Légende :

F : cote fonctionnelle

NF : cote non-fonctionnelle

AUX : dimension auxiliaire

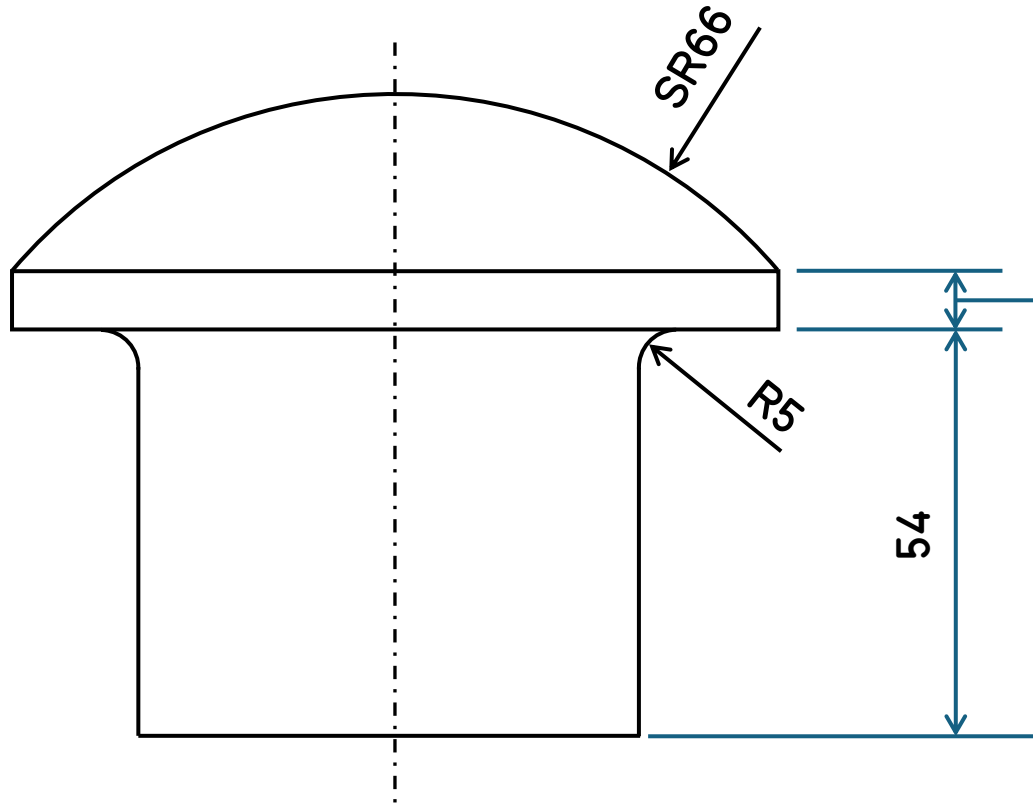
Rappel : choisir une cote



Recommandé : une cote mesurable

La cote de 49 mm n'est pas mesurable car difficile de trouver le point de tangence.

Rappel : choisir une cote

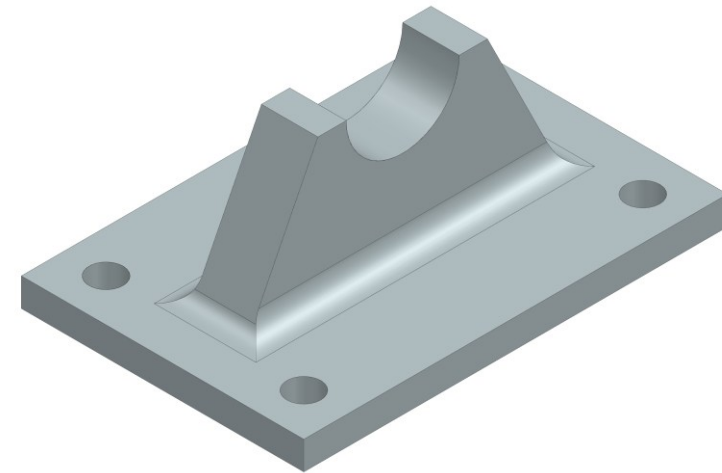
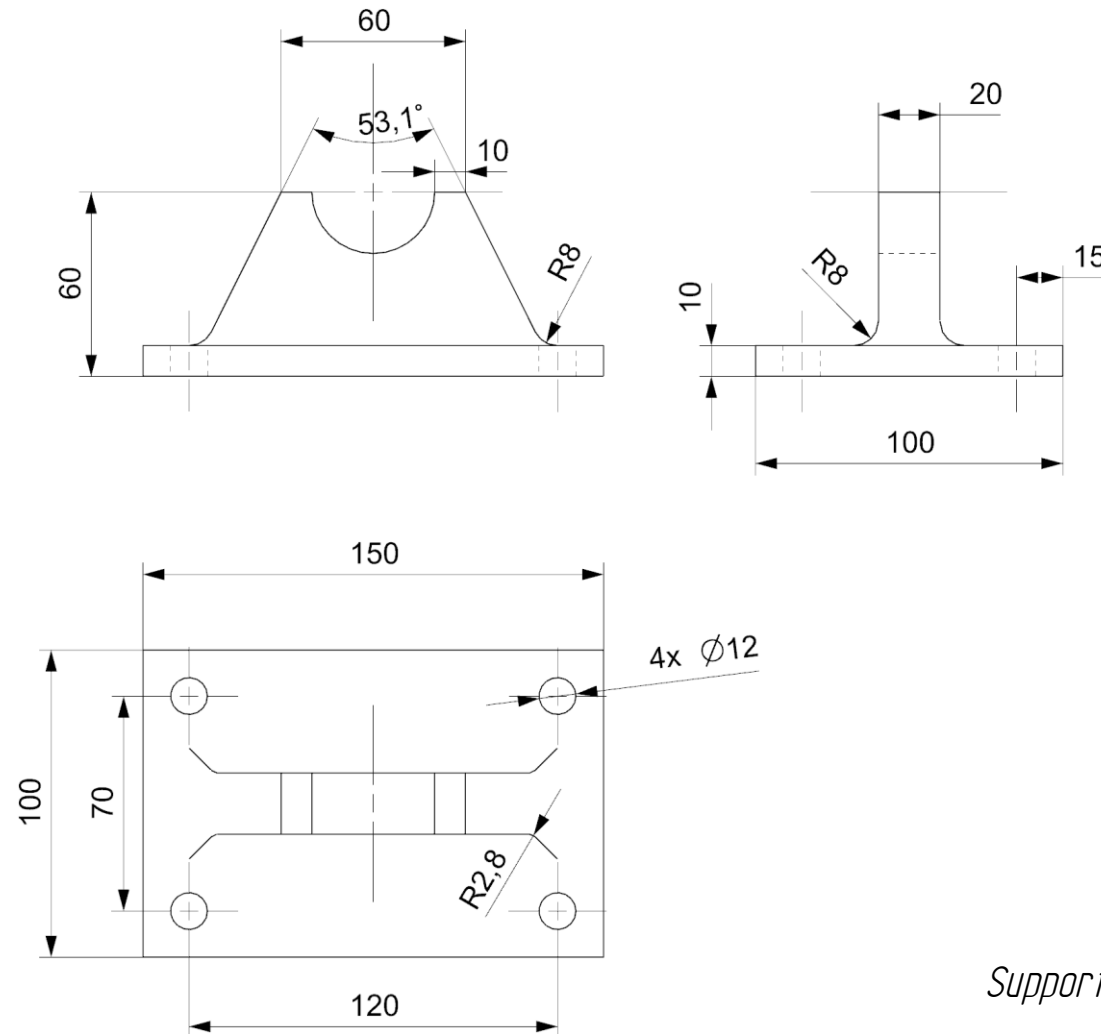


Recommandé : une cote mesurable

Attention aux arrondis dans la cote (NX arrondit par défaut à 2 décimales)

6,892720131...

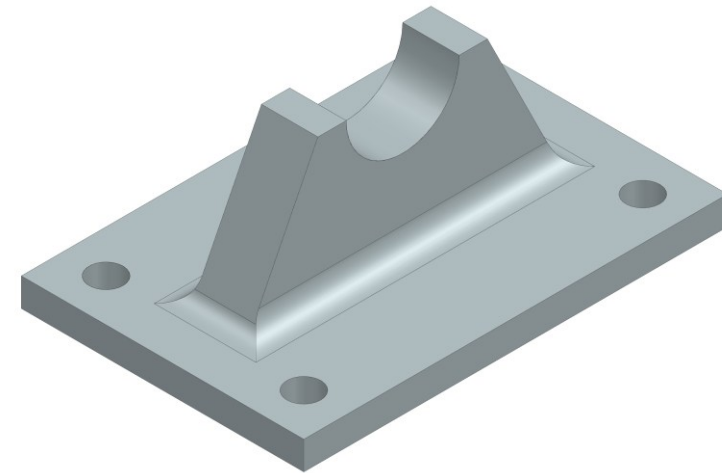
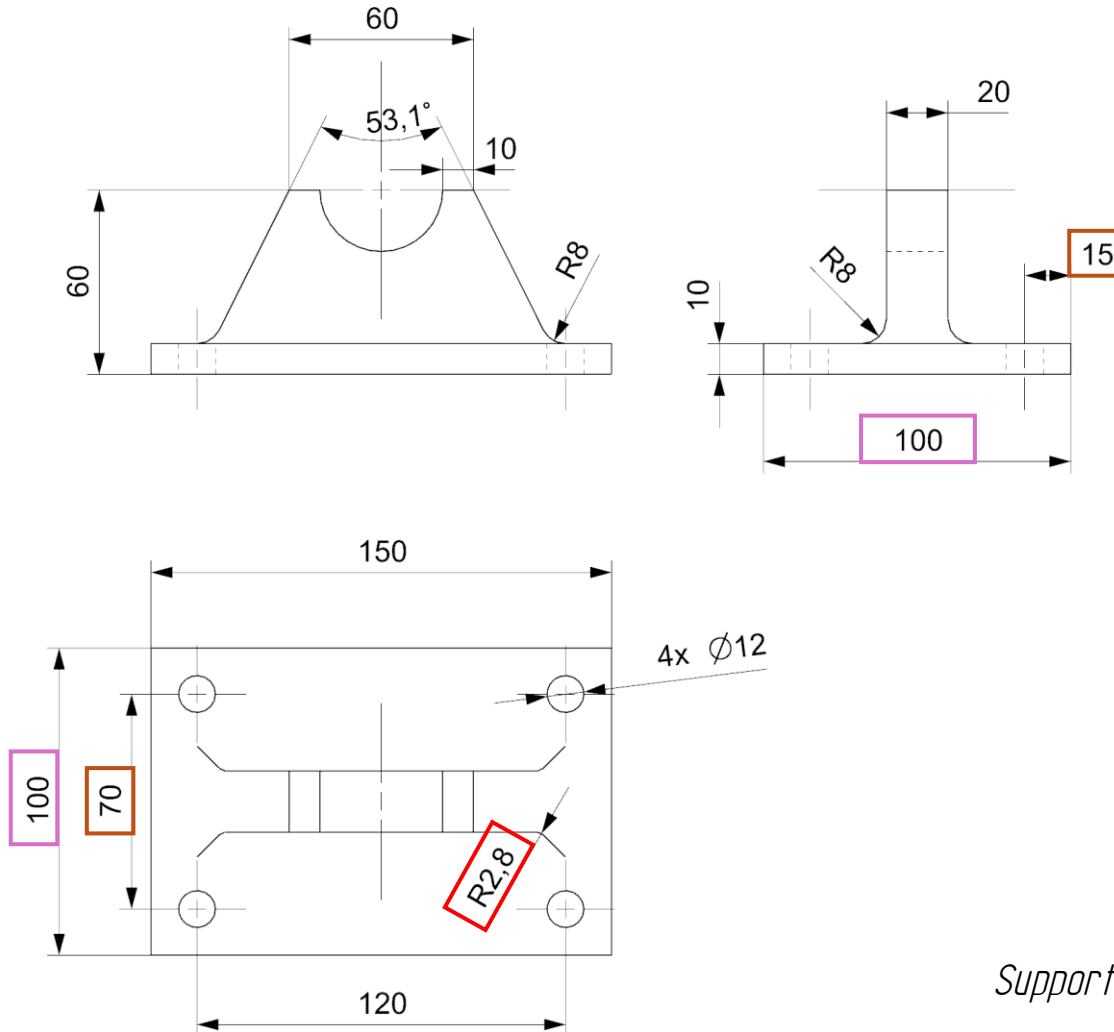
Exercice – *Quelles cotes sont mal choisies ?*



Support roulement – partie inférieure

Exercice – Quelles cotes sont mal choisies ?

Comment
déterminer le
diamètre de l'axe ?



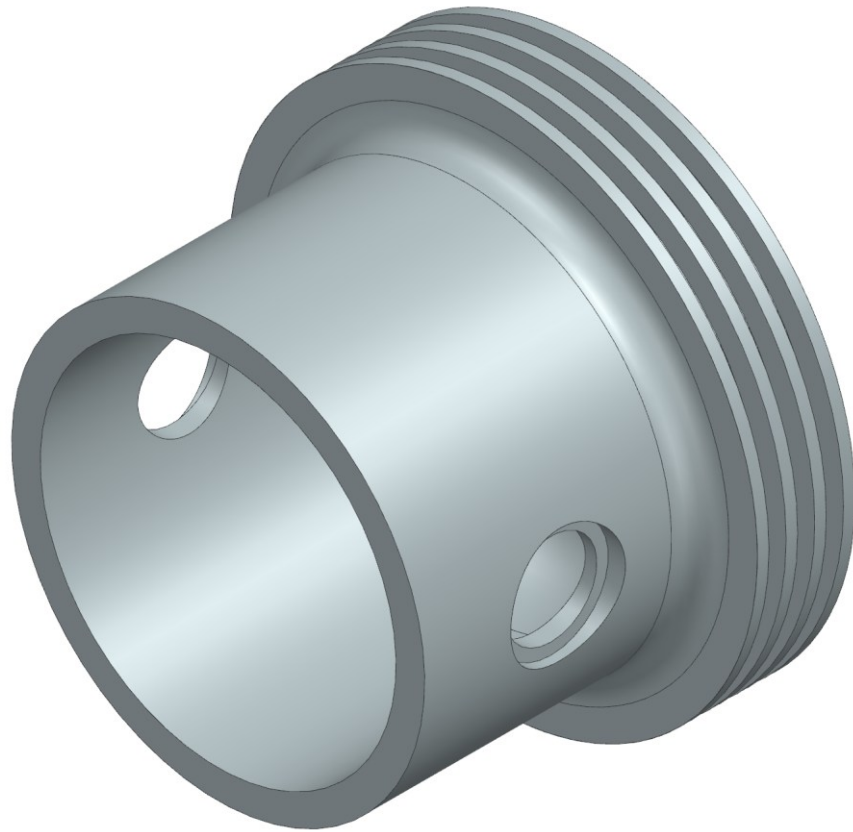
Support roulement – partie inférieure

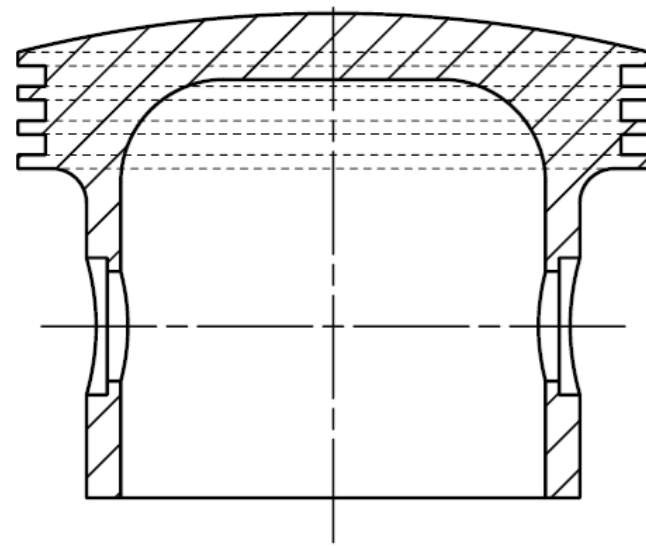
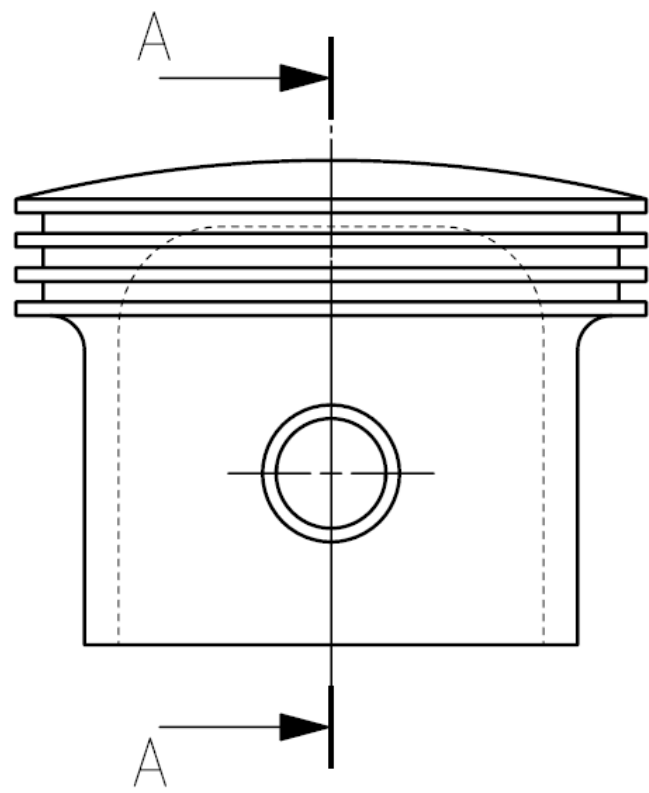
Exercice – *Quel(s) plan(s) est/sont correct(s) ?*



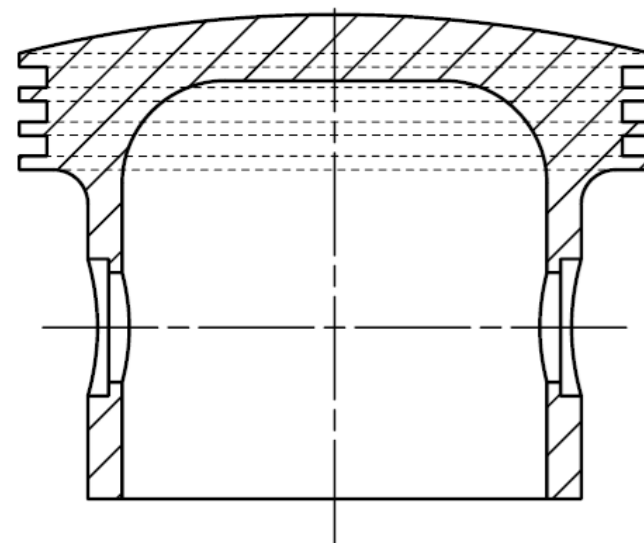
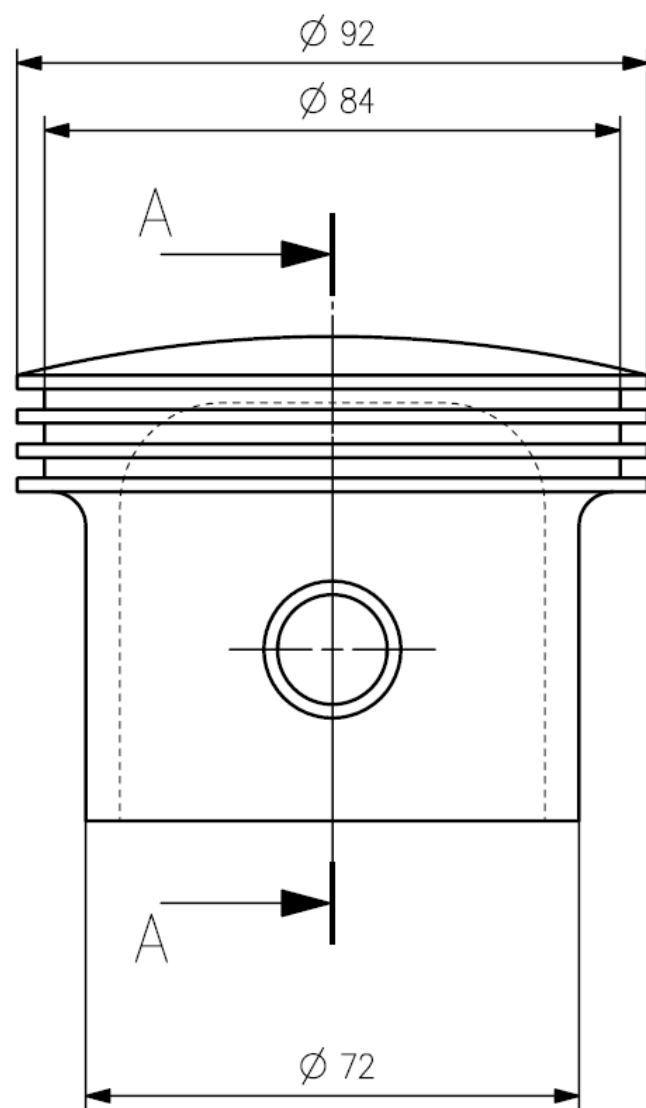
app.wooclap.com/COMGRAPH2

Exercice – *Faire le plan de la pièce suivante : piston*

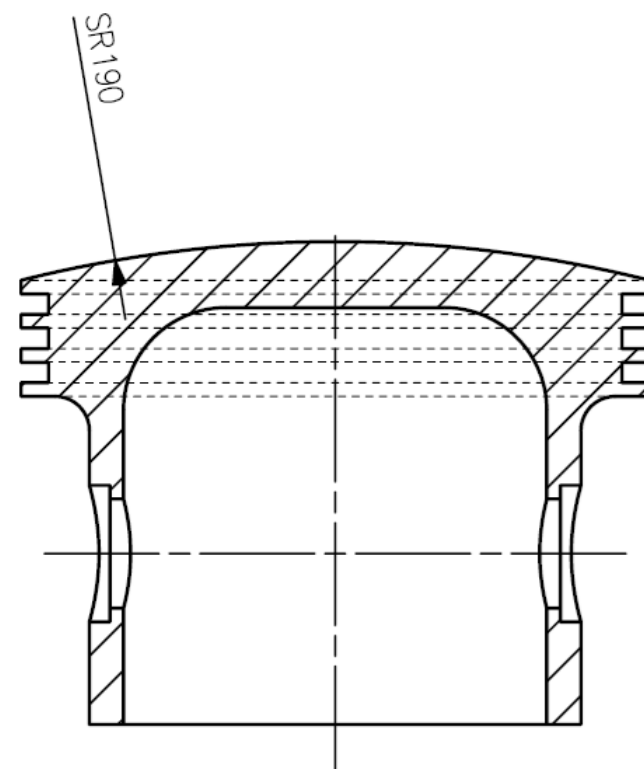
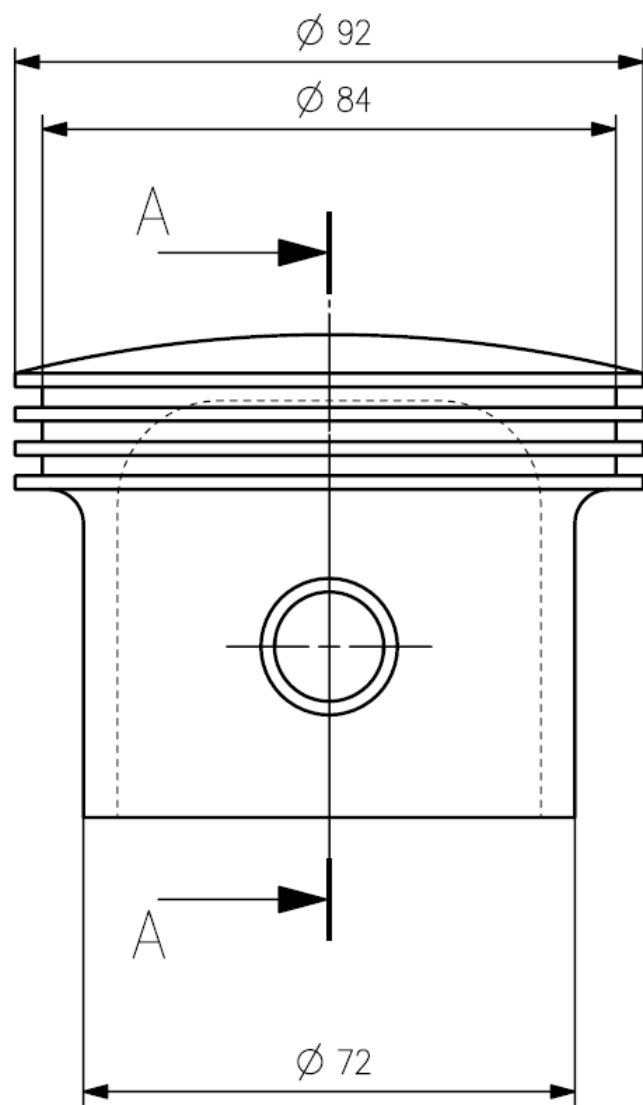




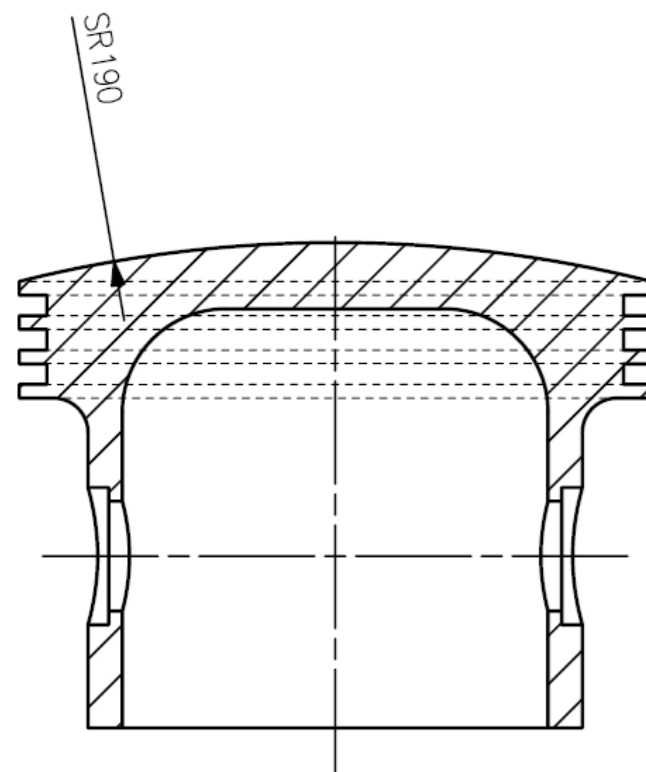
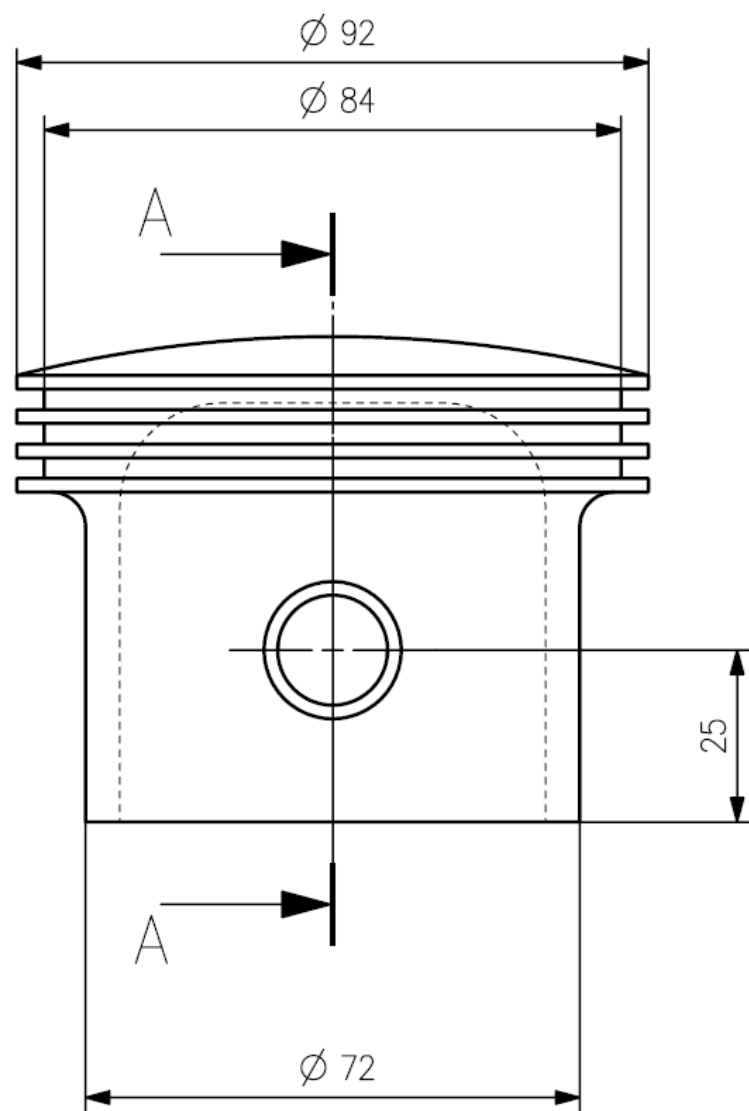
COUPE A-A



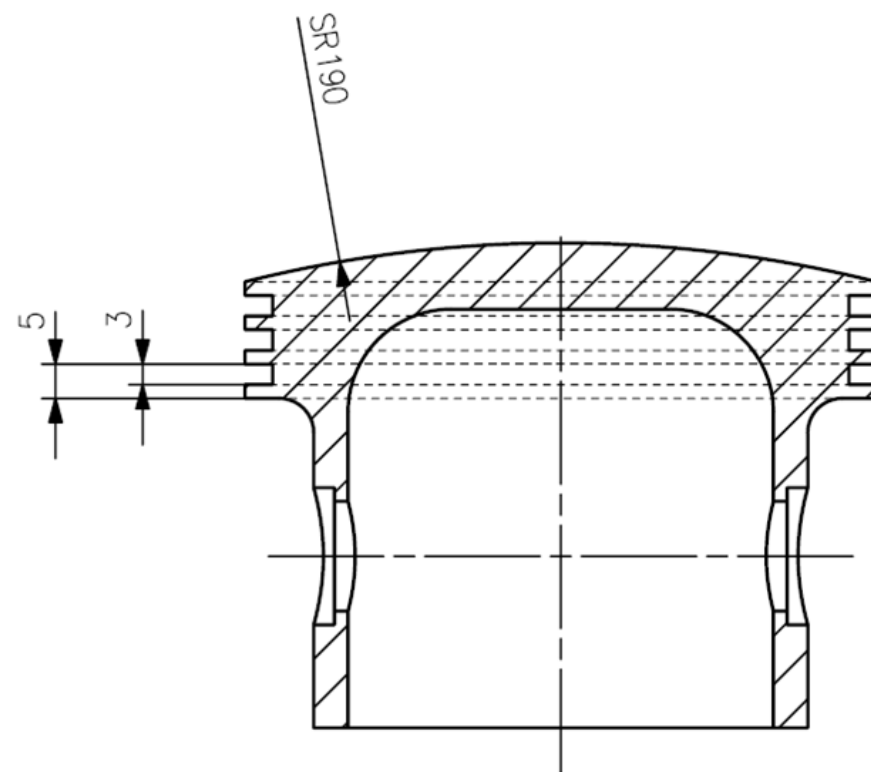
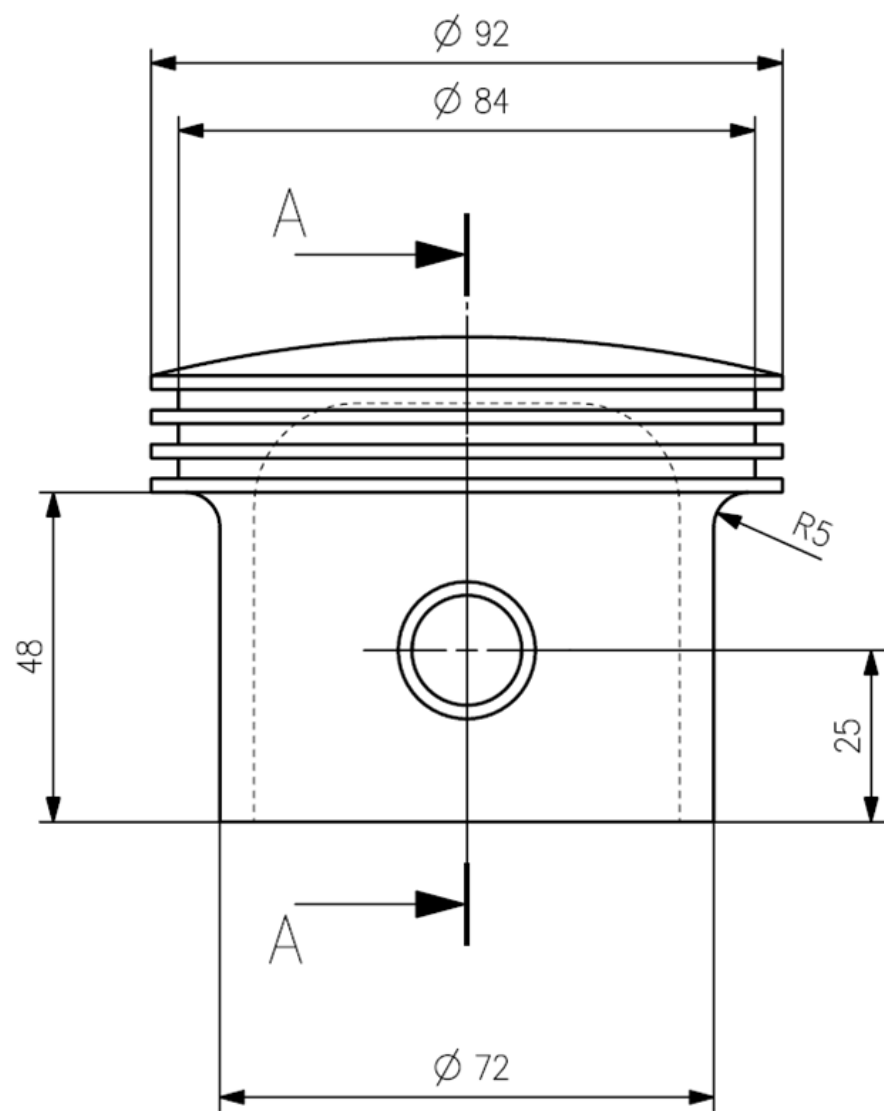
COUPE A-A



COUPE A-A



COUPE A-A



COUPE A-A

