

Communication Graphique

Séance de travaux pratiques :
Plans et cotations

Alex Bolyn - 6 octobre 2025

Objectifs de la séance

I. Plan et vues :

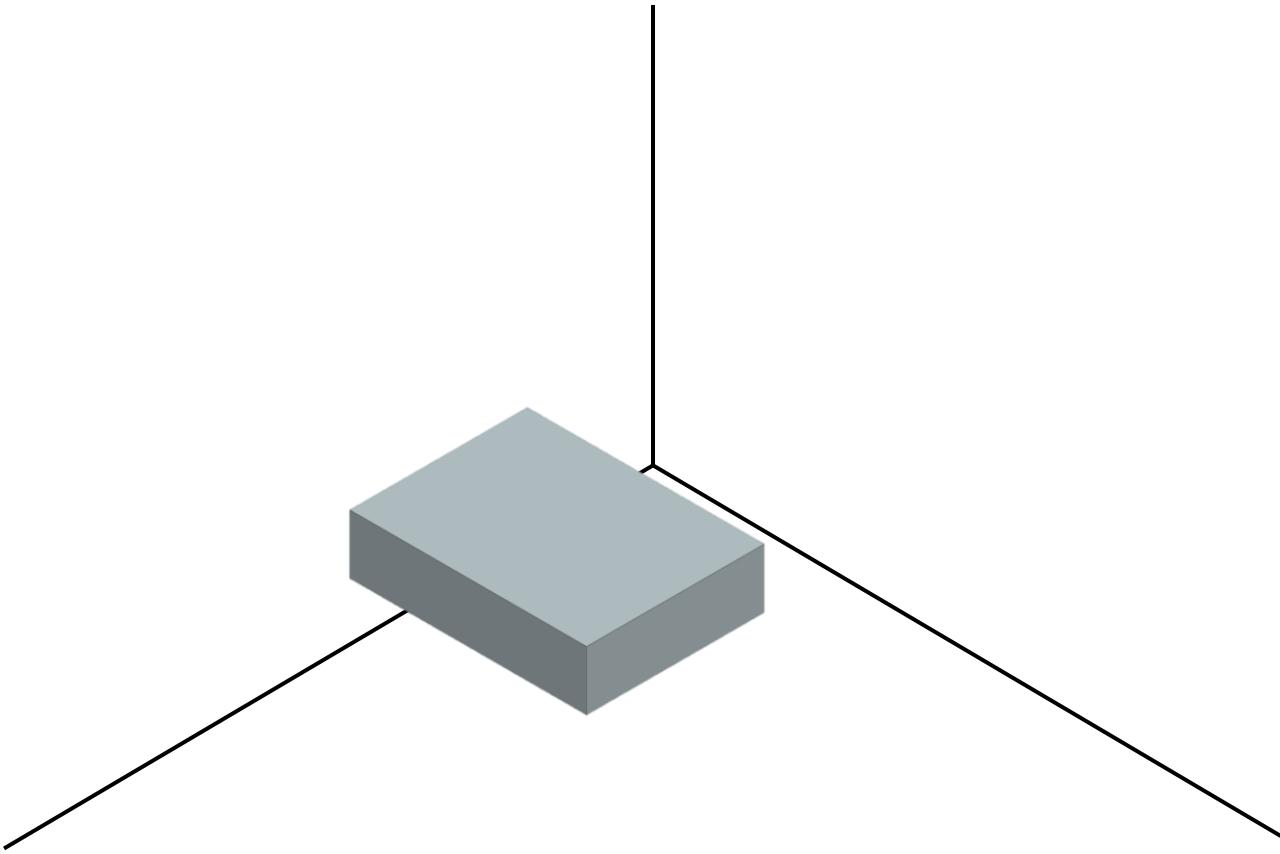
- Lire et appliquer la norme de projection européenne
- Comprendre les conséquences d'une projection
- Reconnaître les possibles ambiguïtés
- Déterminer et choisir les vues nécessaires à un plan

II. Cotation :

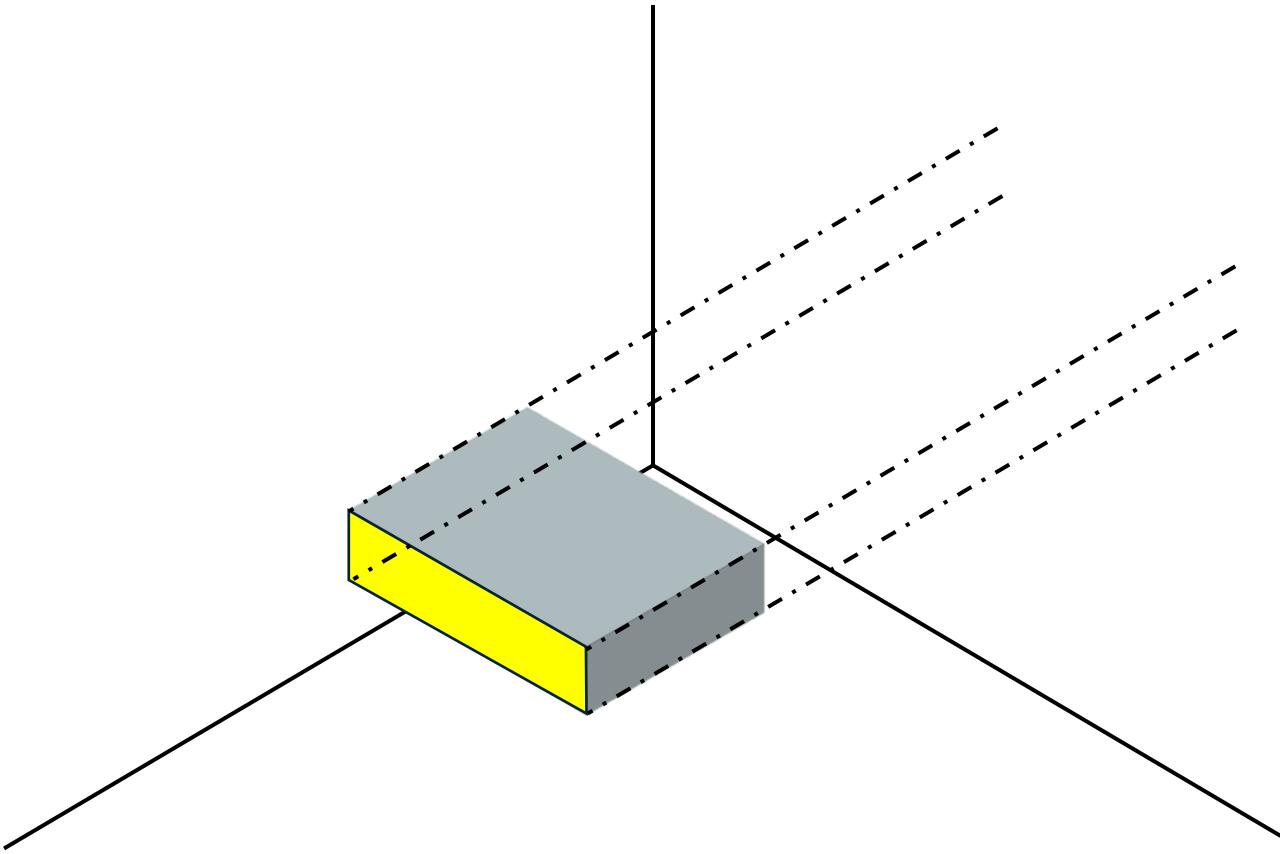
- Appliquer le concept de cotation fonctionnelle
- Comprendre ce qui détermine le choix d'une cote

I. Plan et vues

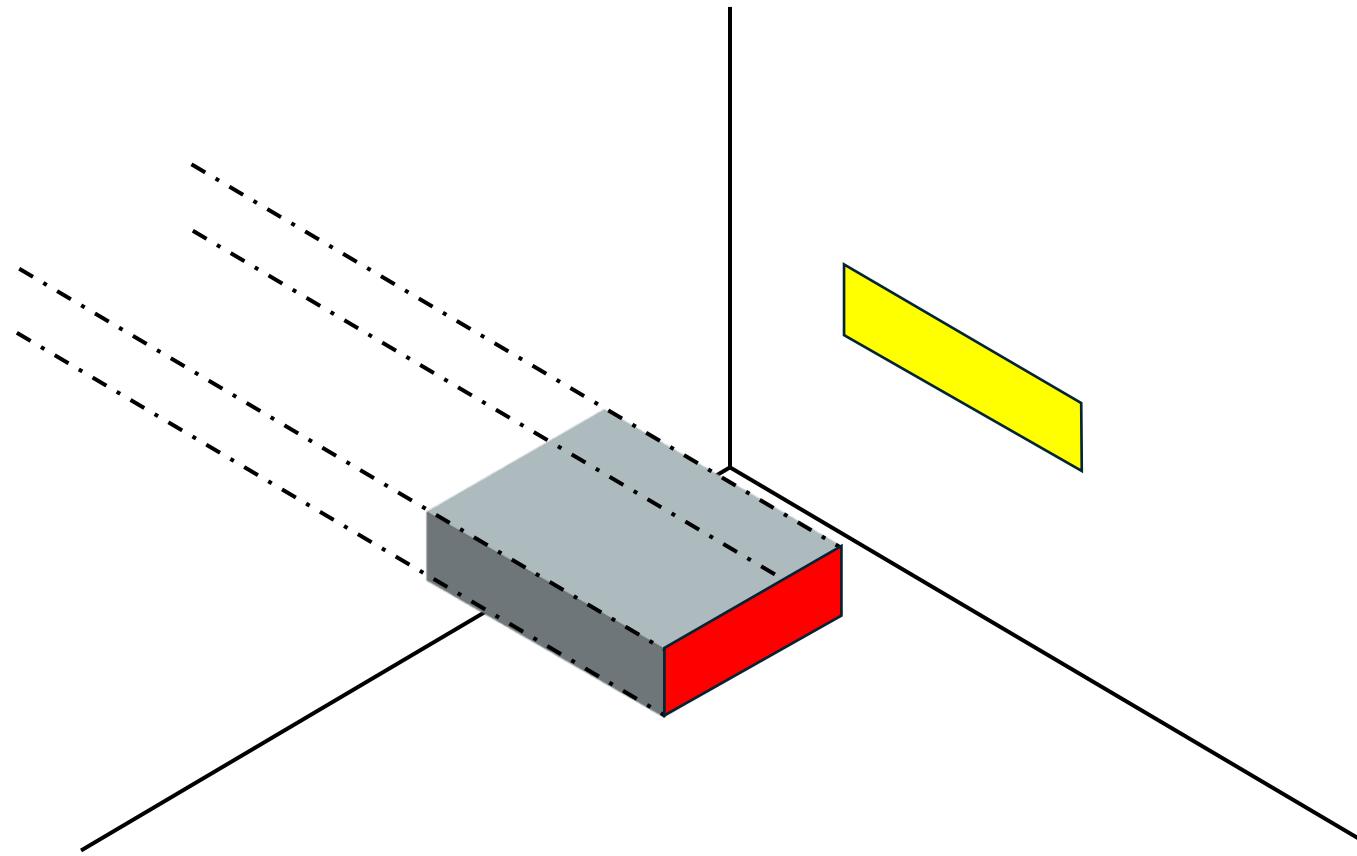
Rappel : norme européenne



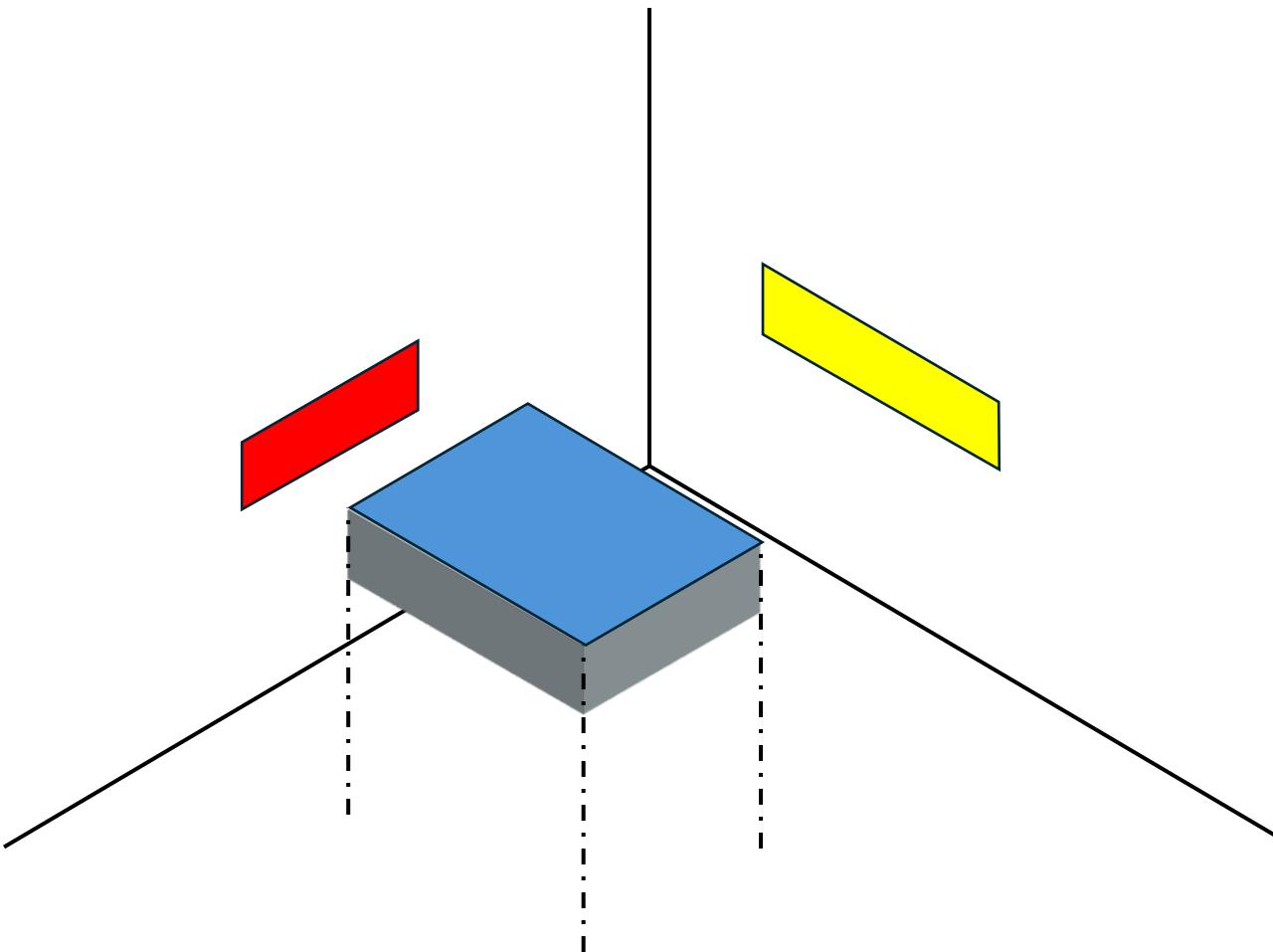
Rappel : norme européenne



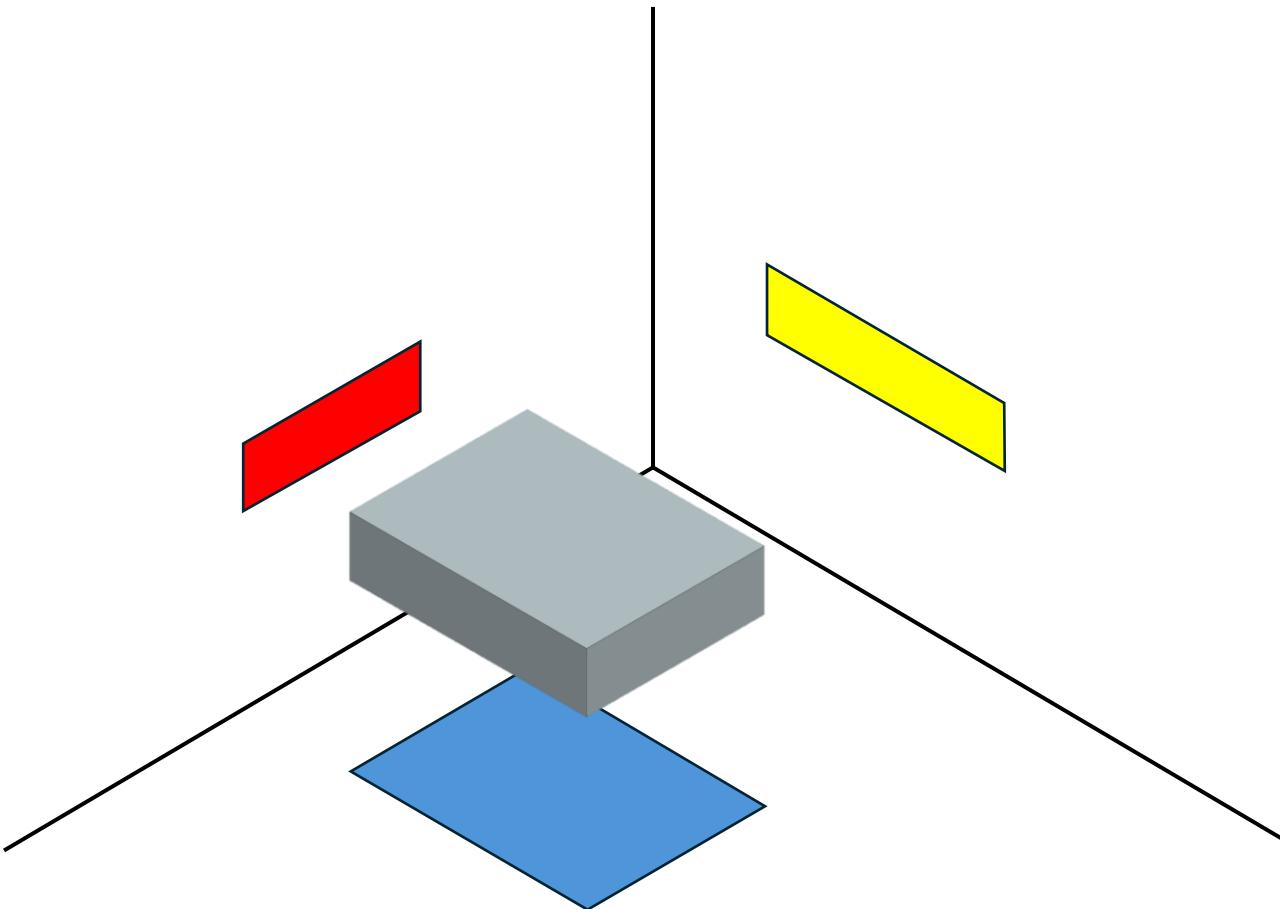
Rappel : norme européenne



Rappel : norme européenne



Rappel : norme européenne

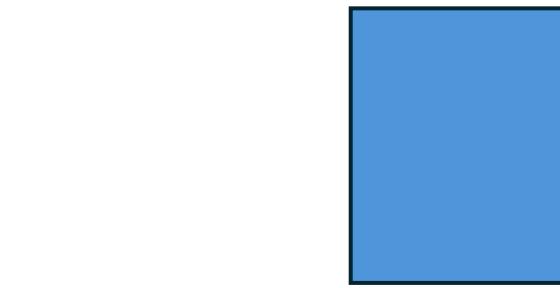


Rappel : norme européenne

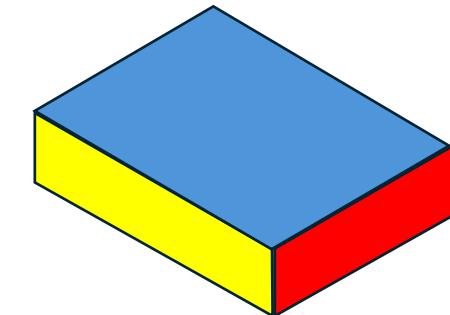
Vue de face



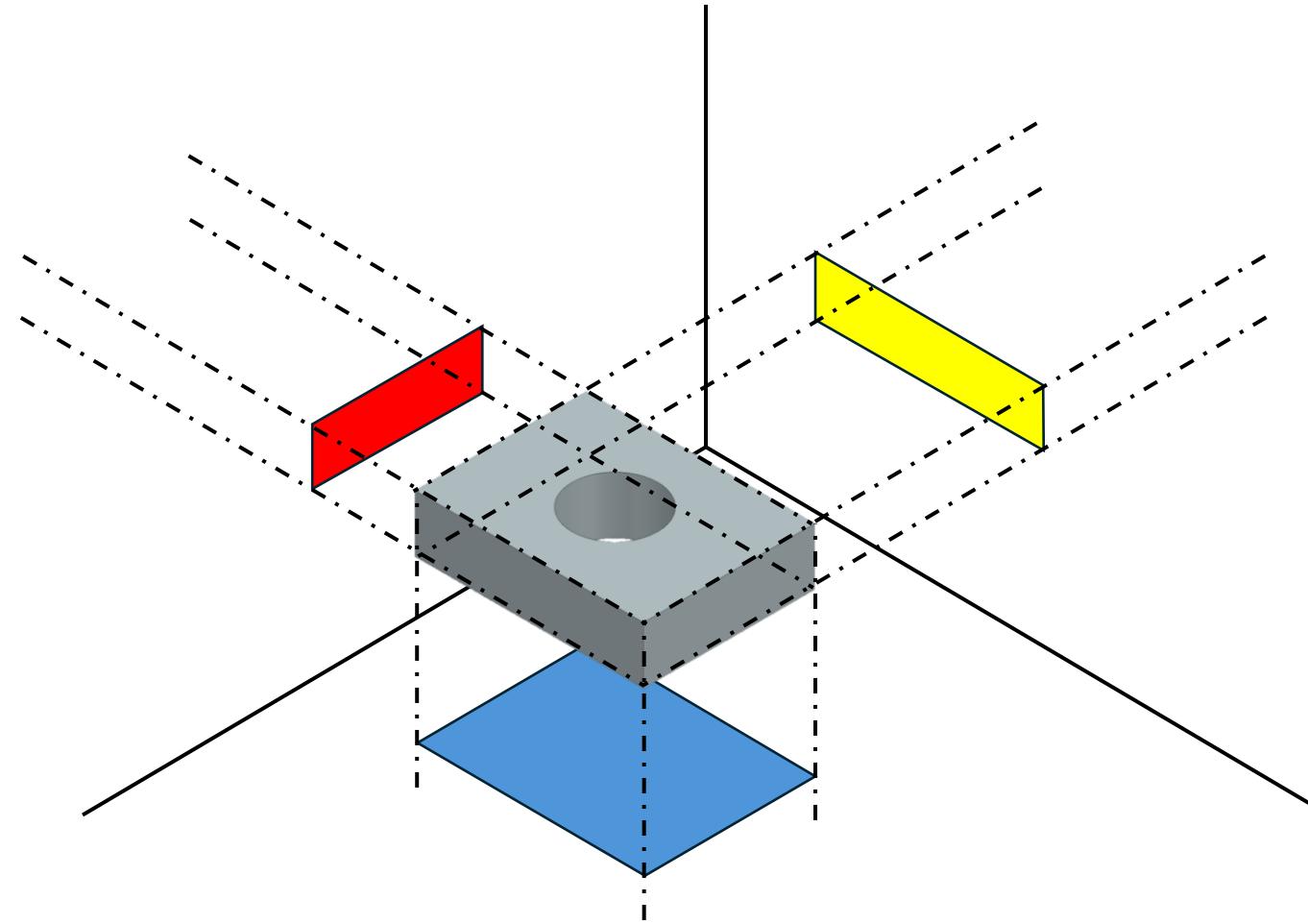
Vue de gauche



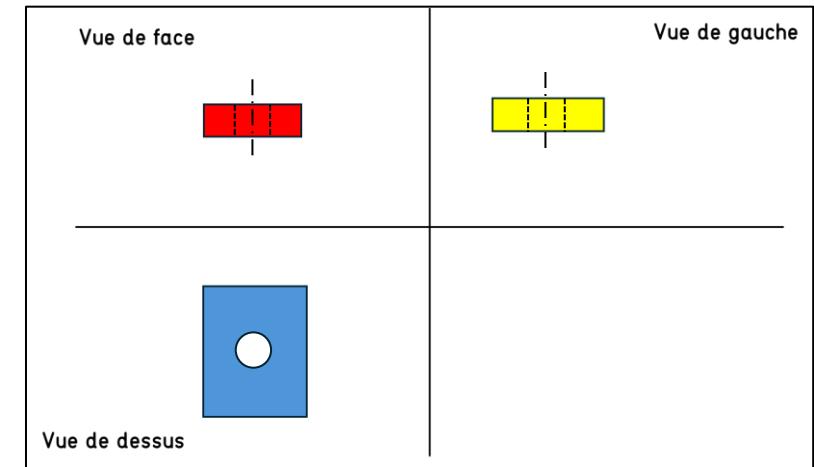
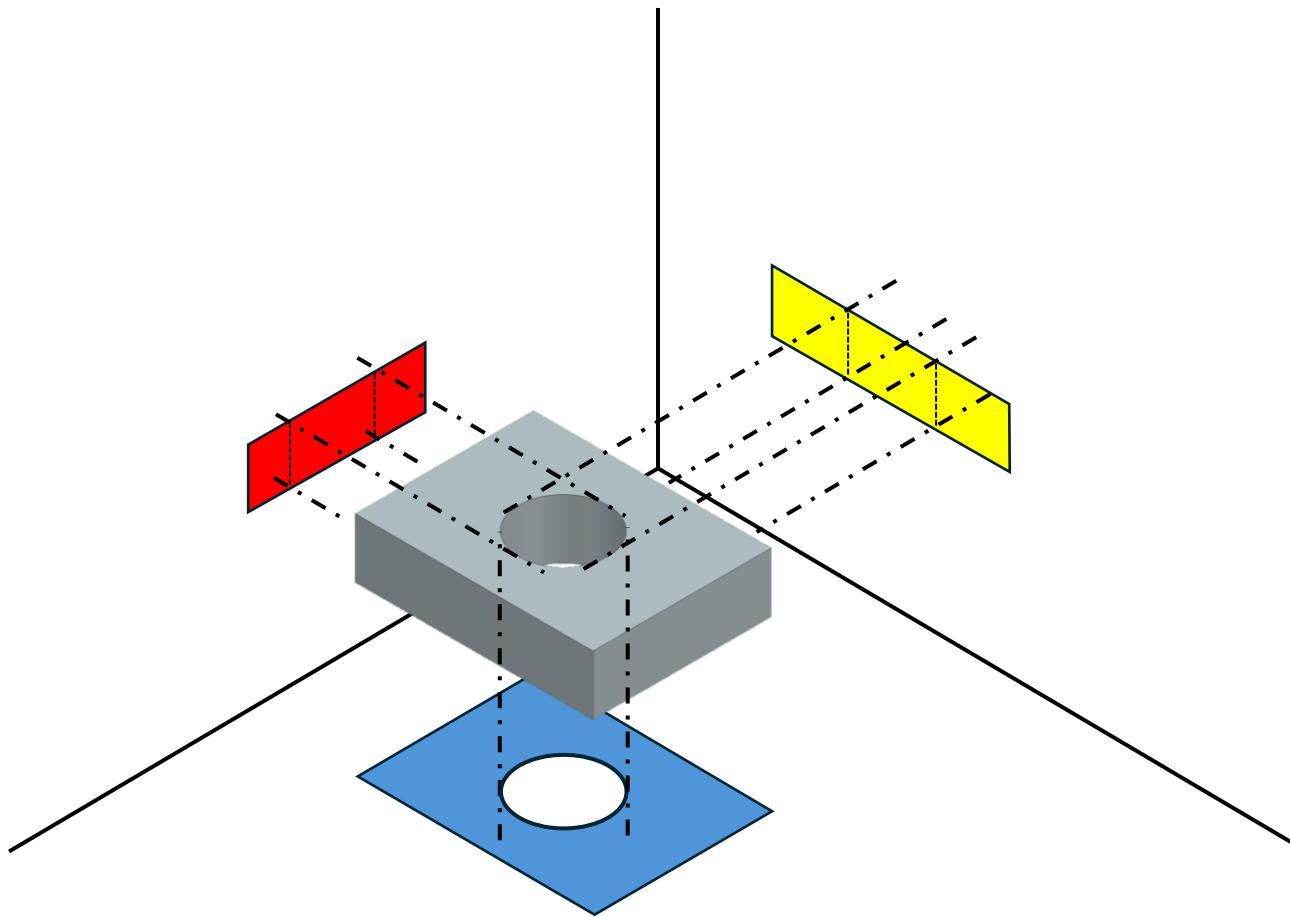
Vue de dessus



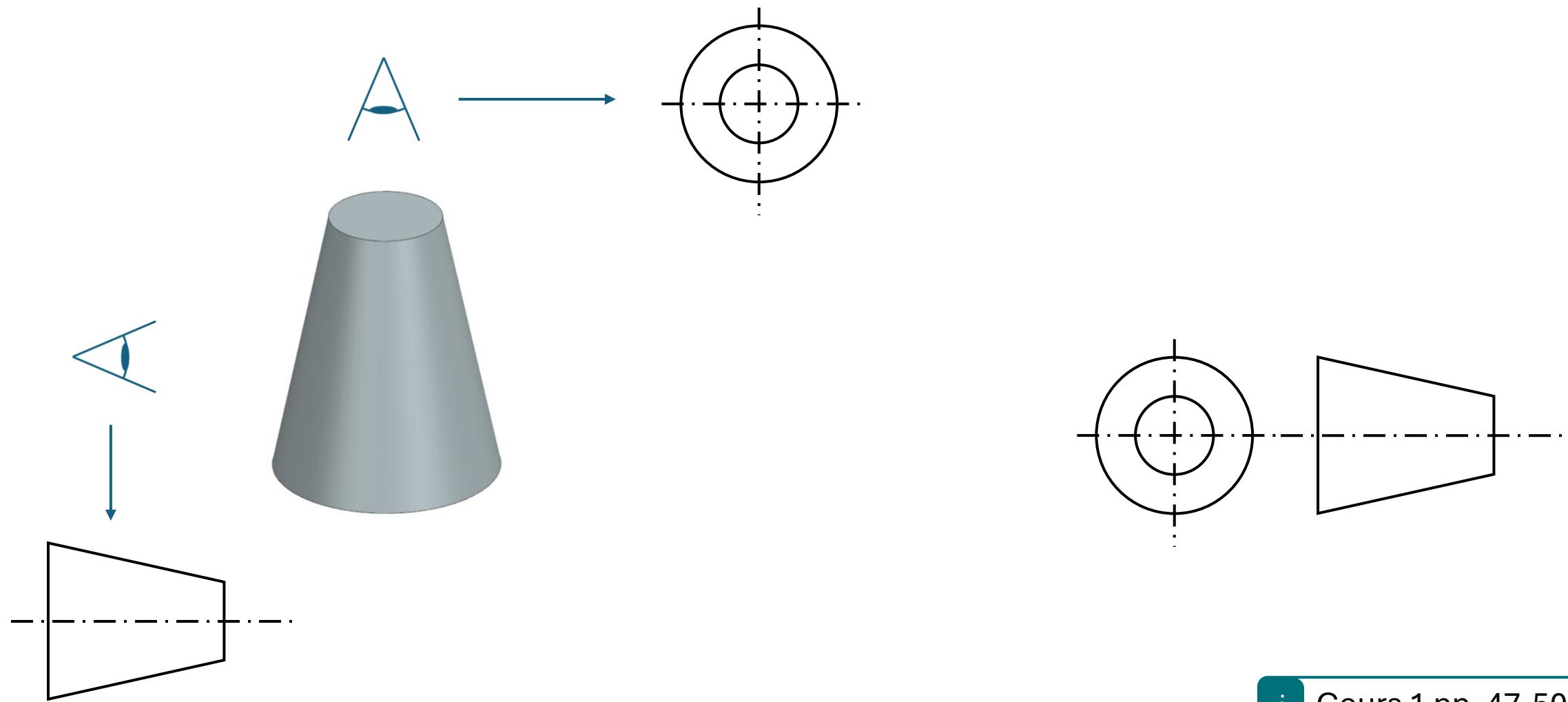
Rappel : norme européenne



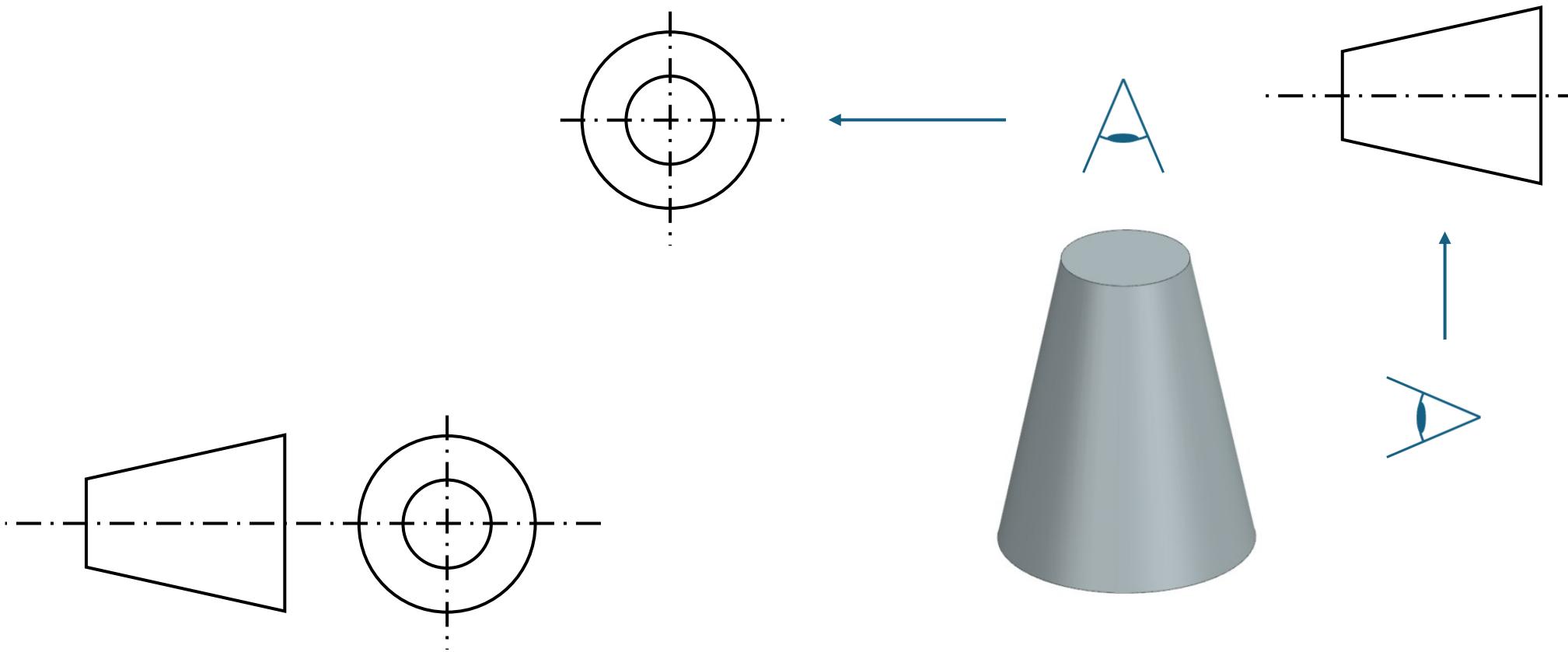
Rappel : norme européenne



Rappel : norme européenne



Rappel : norme européenne



Rappel : les “dangers” de la projection

Vue de face



Vue de gauche

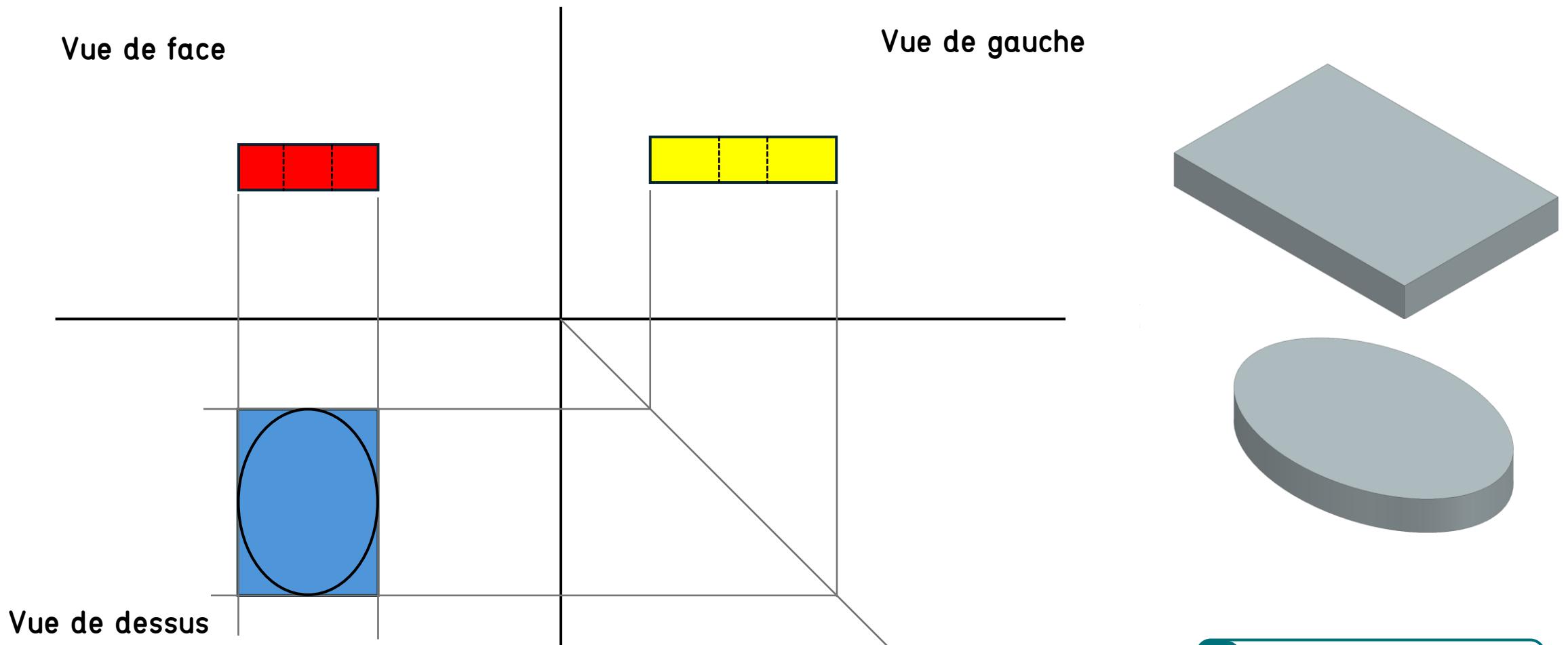


Vue de dessus

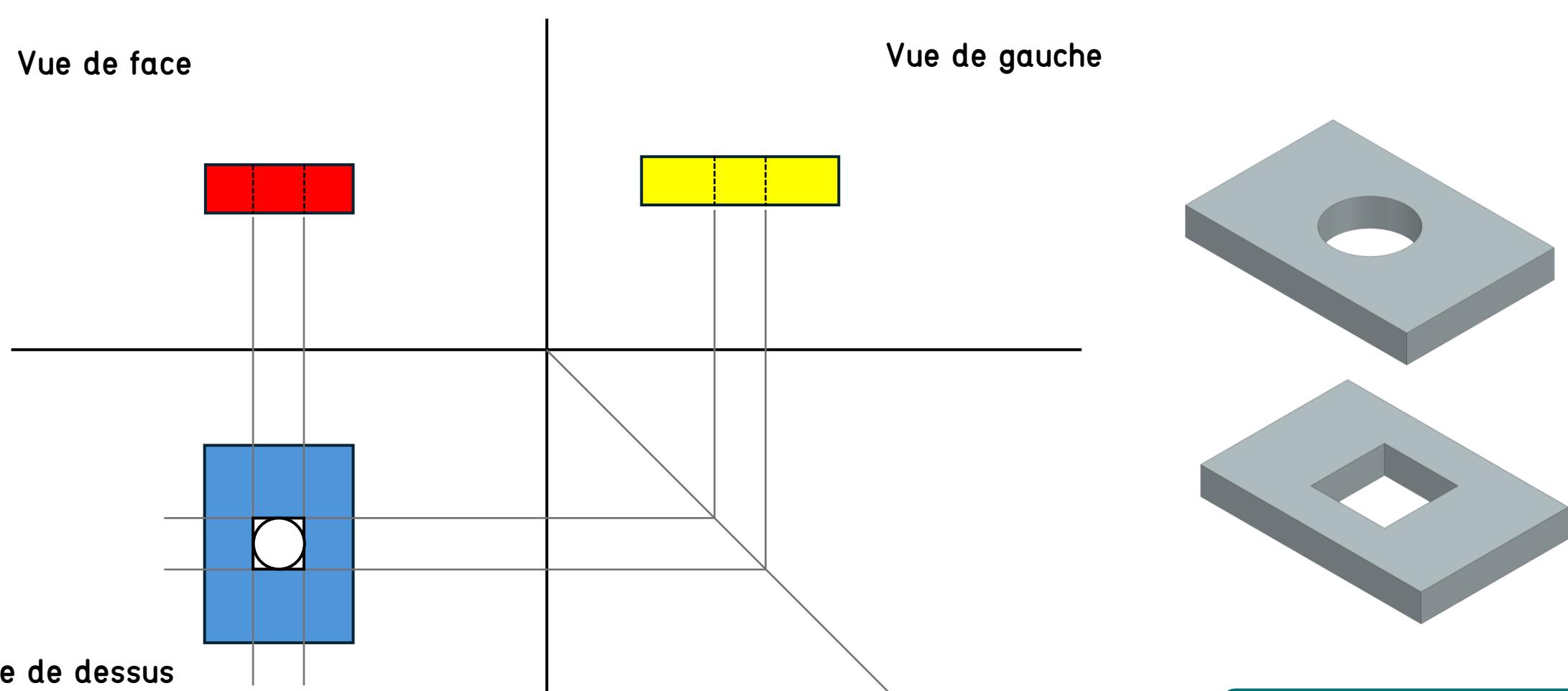
i

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

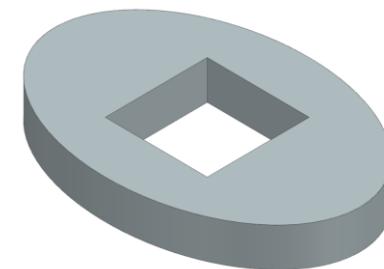
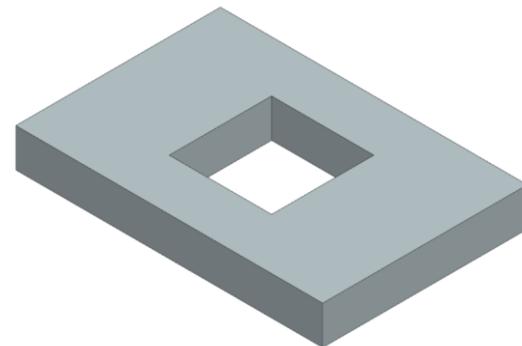
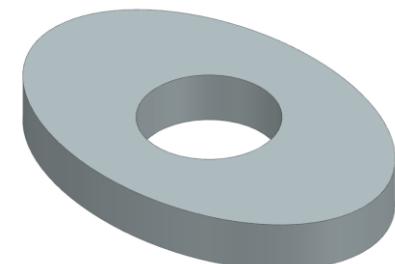
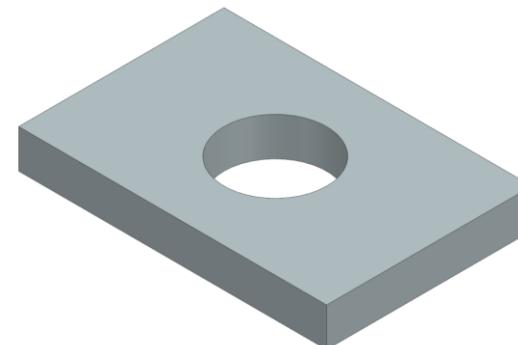
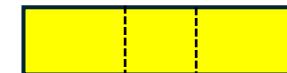
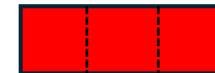
Rappel : les “dangers” de la projection



Rappel : les “dangers” de la projection



Rappel : les “dangers” de la projection

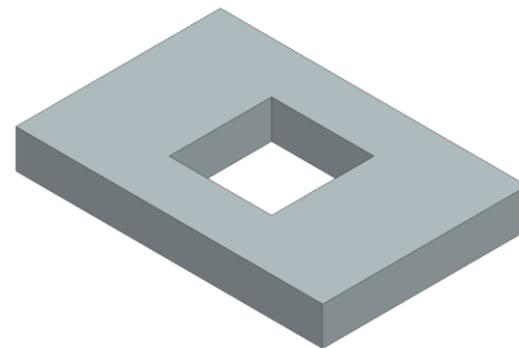


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Cours 1 pp. 65-67
et pp.79-80

Rappel : les “dangers” de la projection

Aide de la norme !

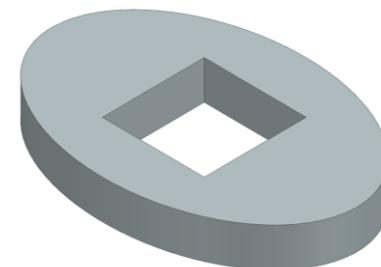
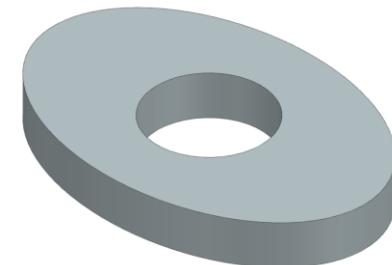
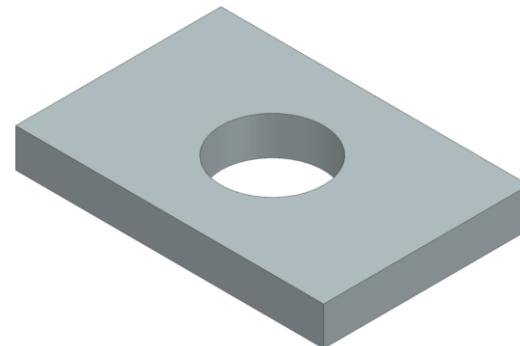
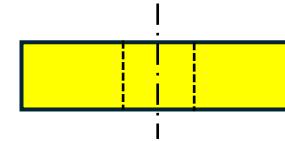
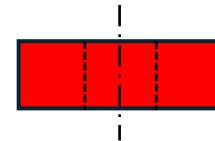


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Cours 1 pp. 65-67
et pp.79-80

Rappel : les “dangers” de la projection

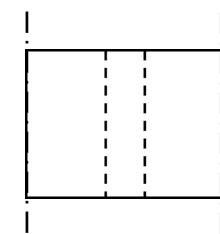
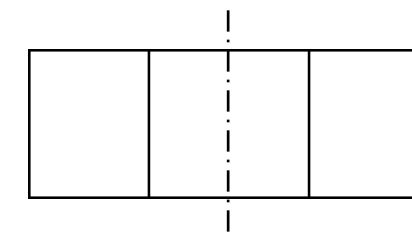
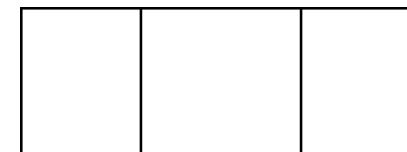
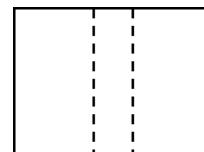
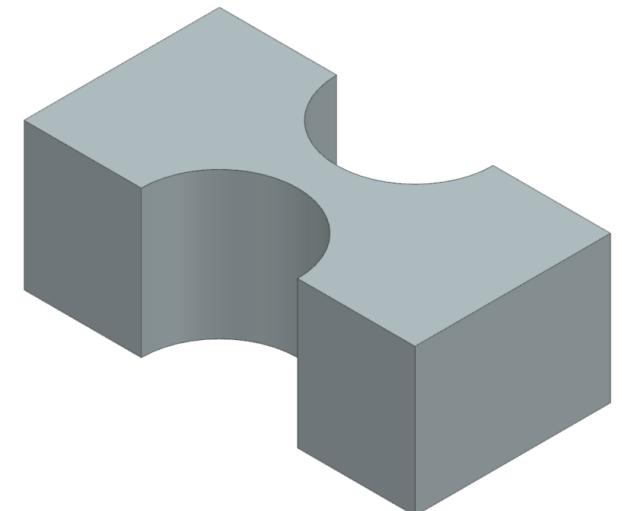
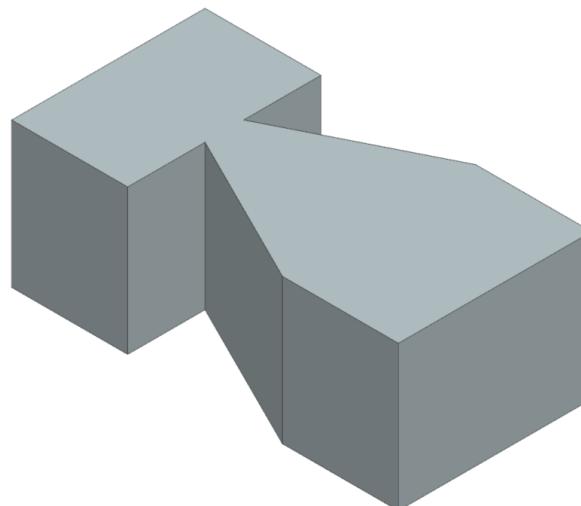
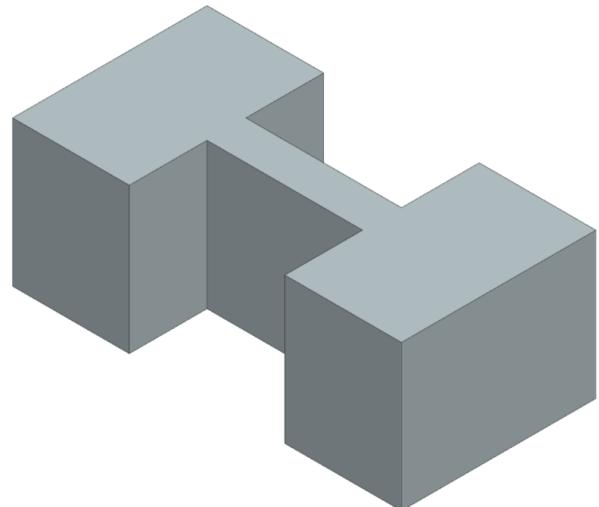
Aide de la norme !



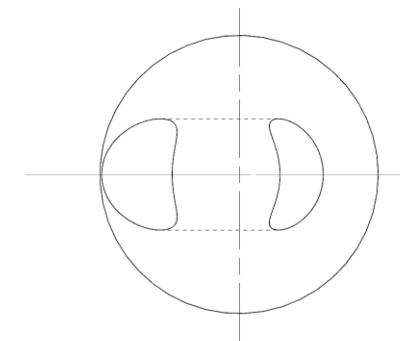
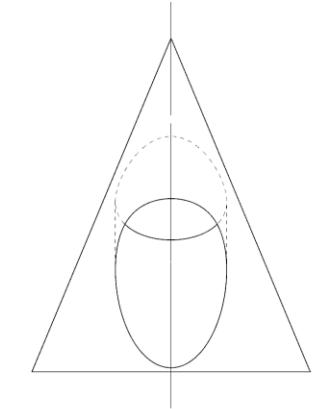
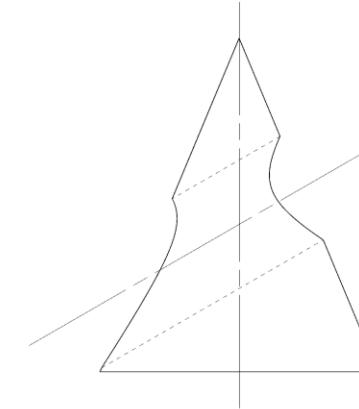
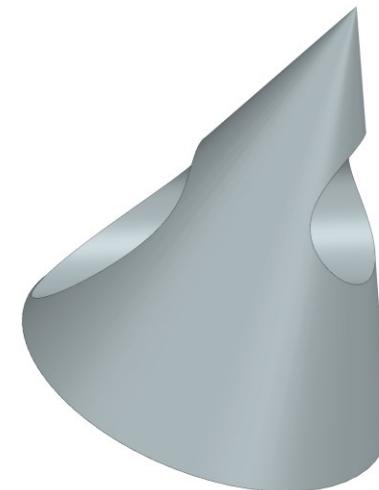
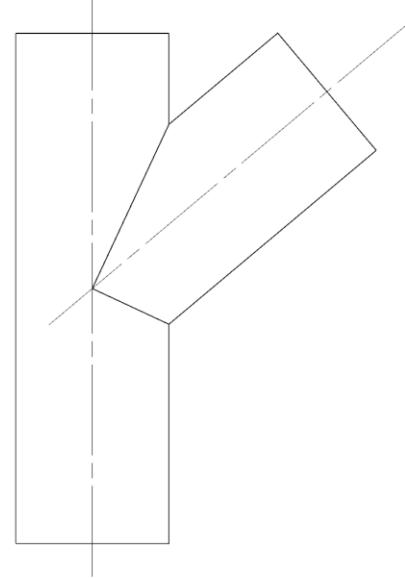
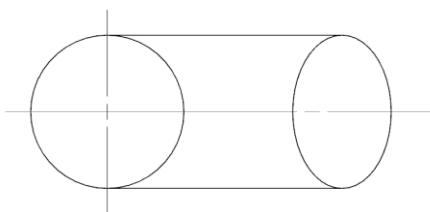
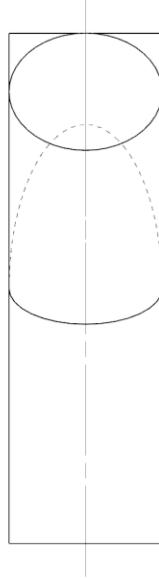
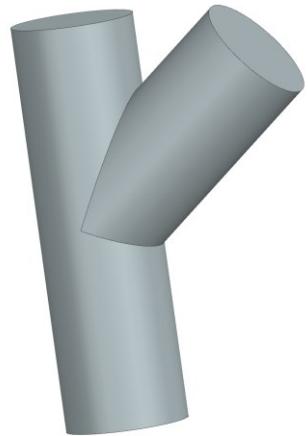
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Cours 1 pp. 65-67
et pp.79-80

Rappel : les “dangers” de la projection



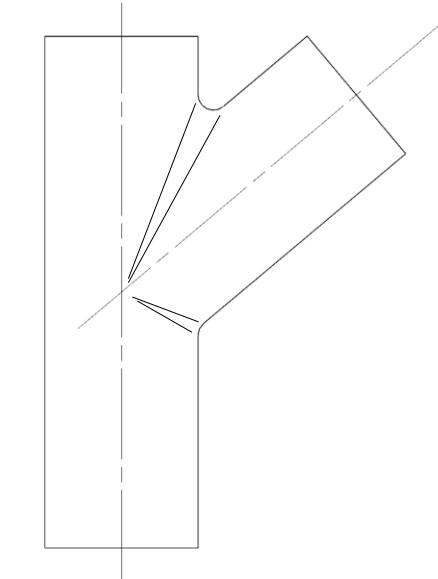
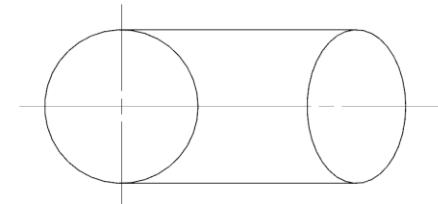
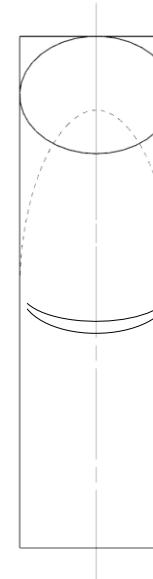
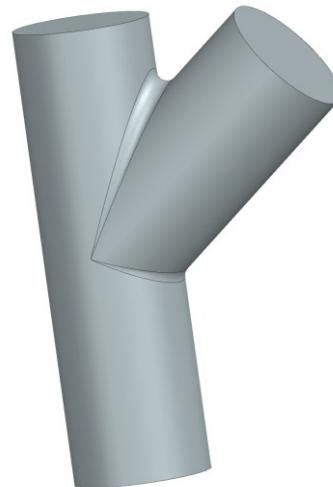
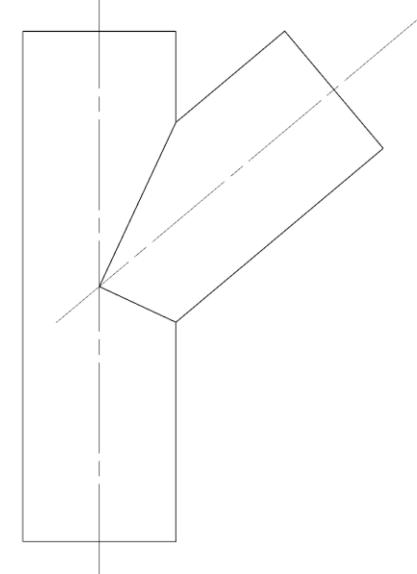
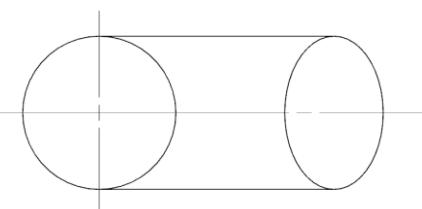
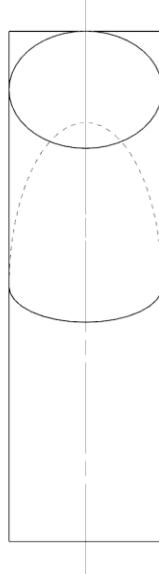
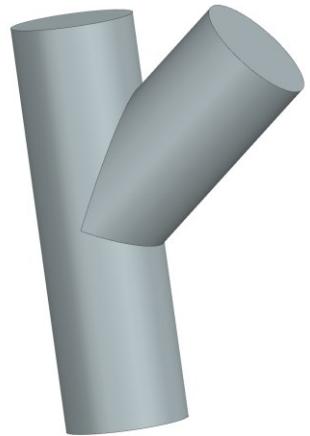
Rappel : les “dangers” de la projection



i

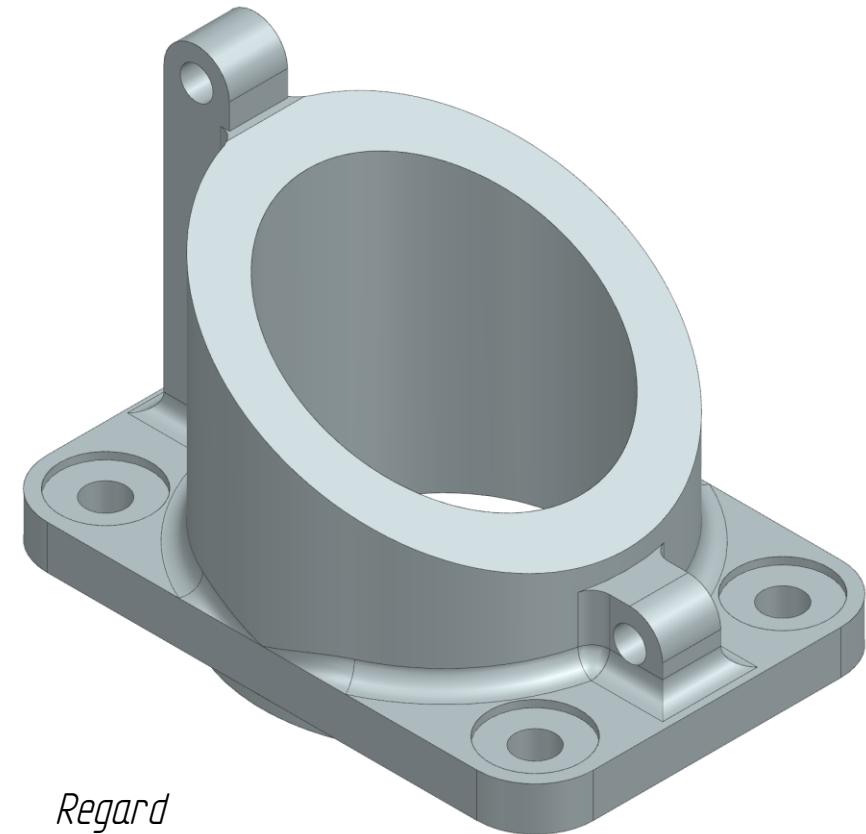
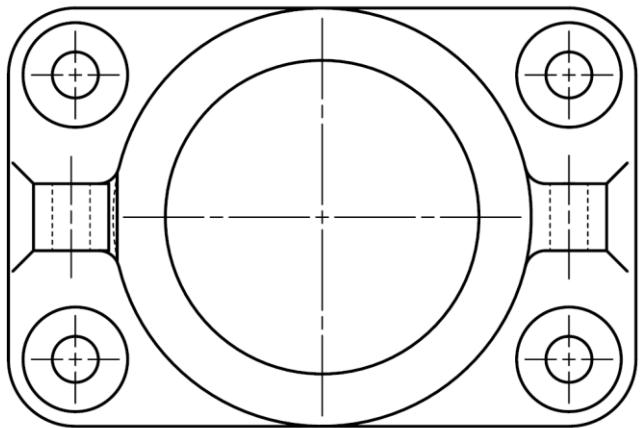
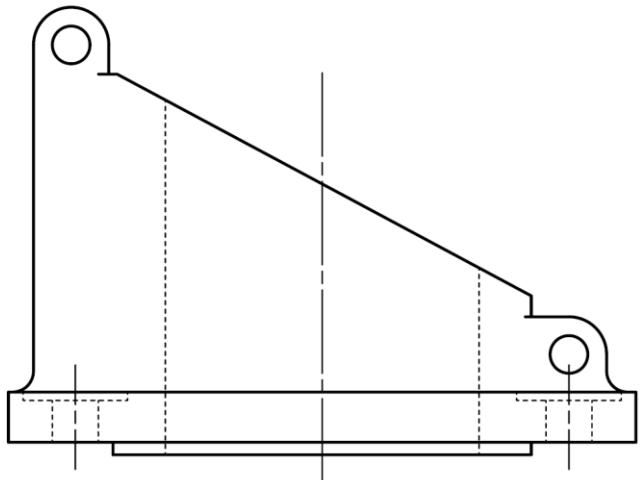
Cours 1 pp. 65-67
et pp.79-80

Rappel : les “dangers” de la projection



i Cours 1 pp. 55-57
et pp. 65-67

Rappel : les “dangers” de la projection

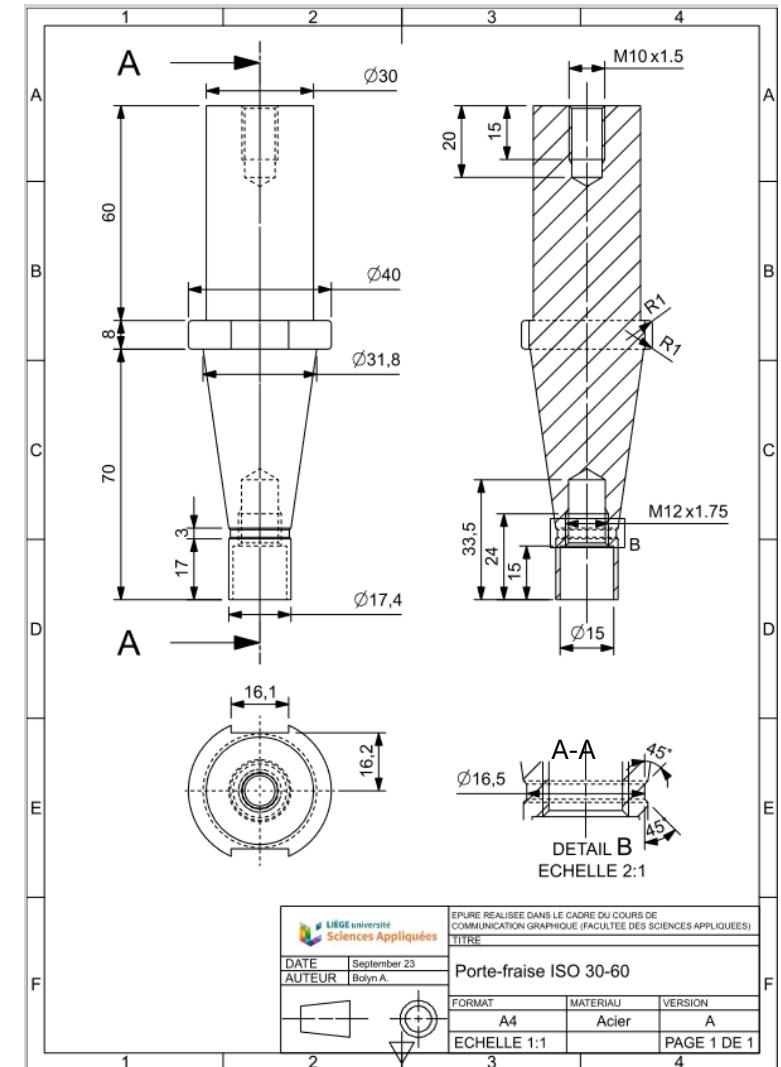
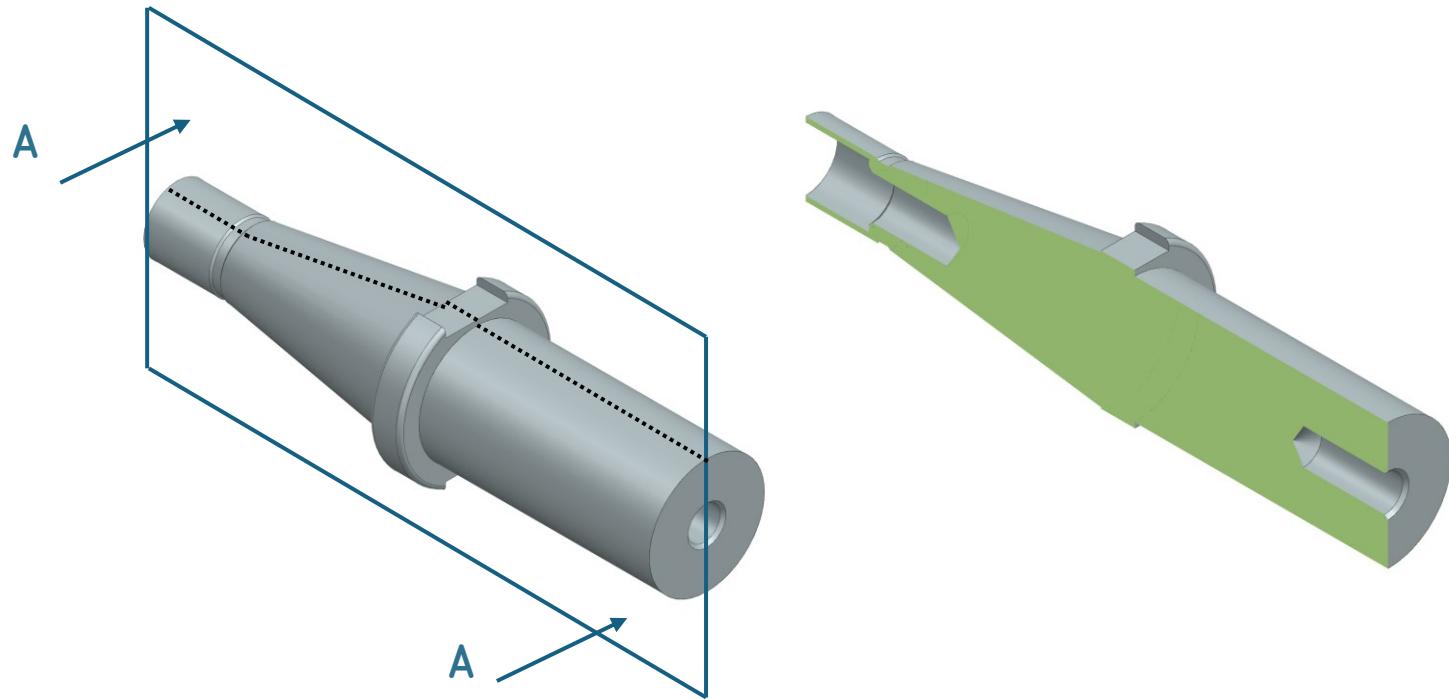


Regard

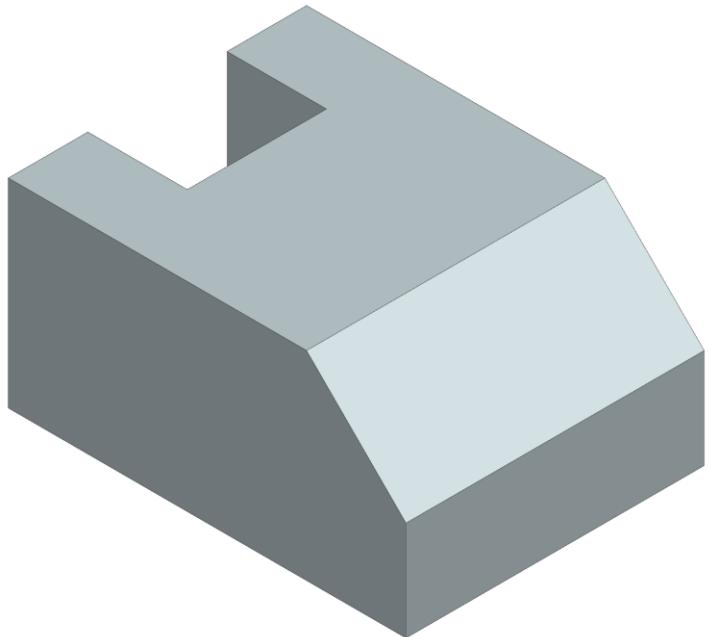
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Cours 1 pp. 65-67
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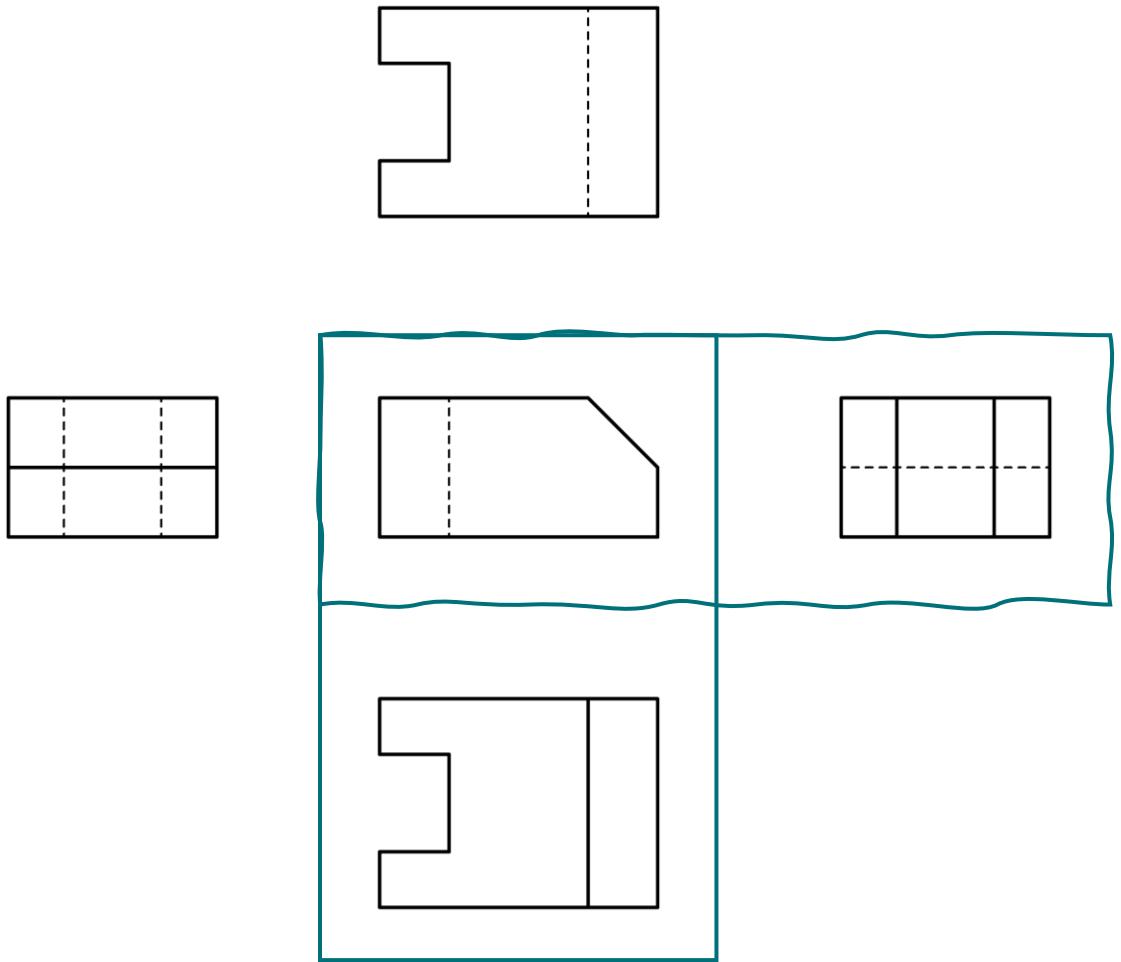
Rappel : coupes et sections



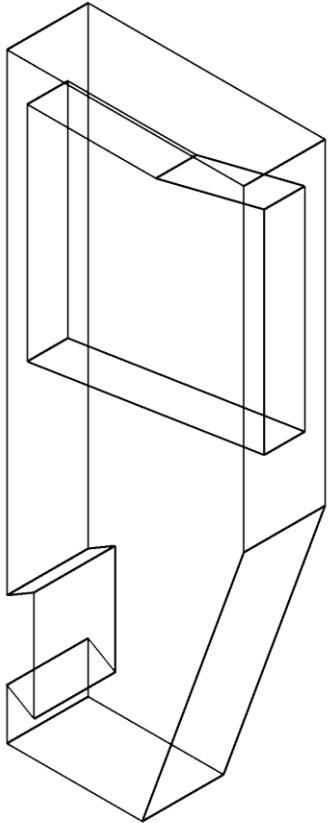
Exercice - Quelles vues sont utiles ?



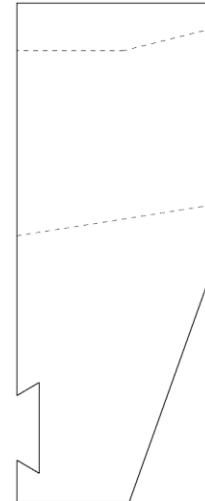
Sabot chanfreiné



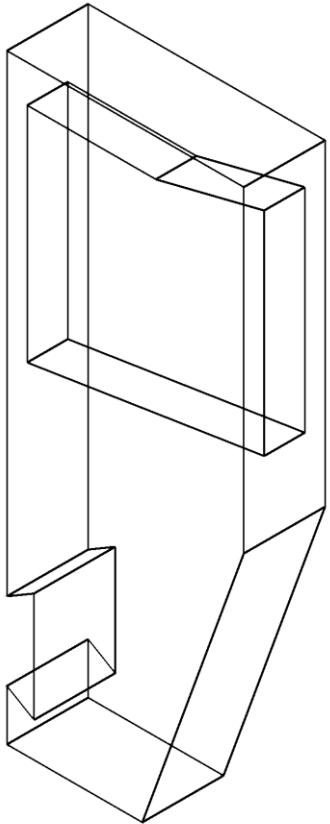
Exercice - Quelles vues sont utiles ?



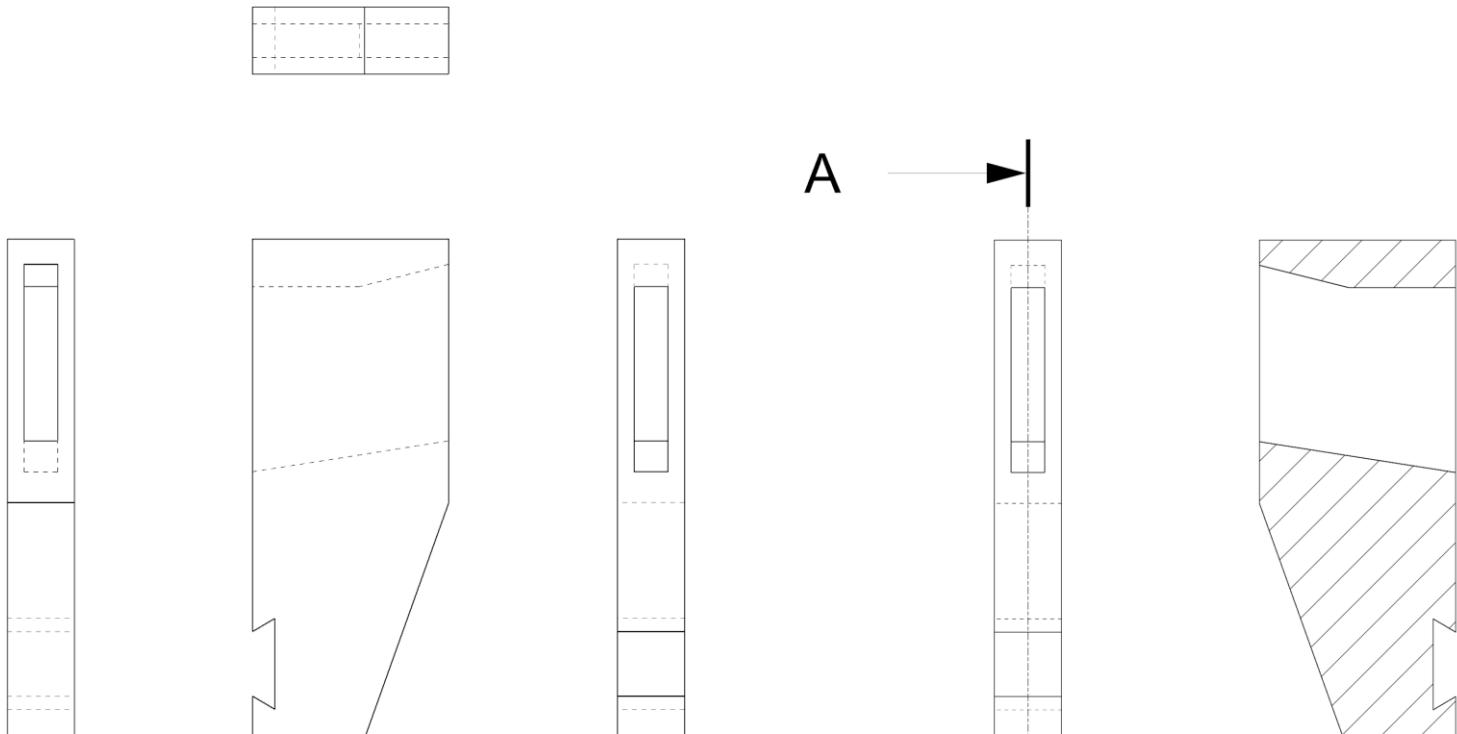
Machoire à crémaillère



Exercice - Quelles vues sont utiles ?



Machoire à crémaillère



A

A

A-A

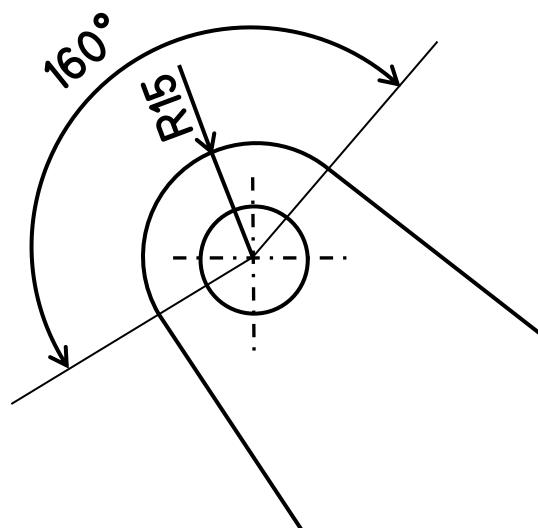
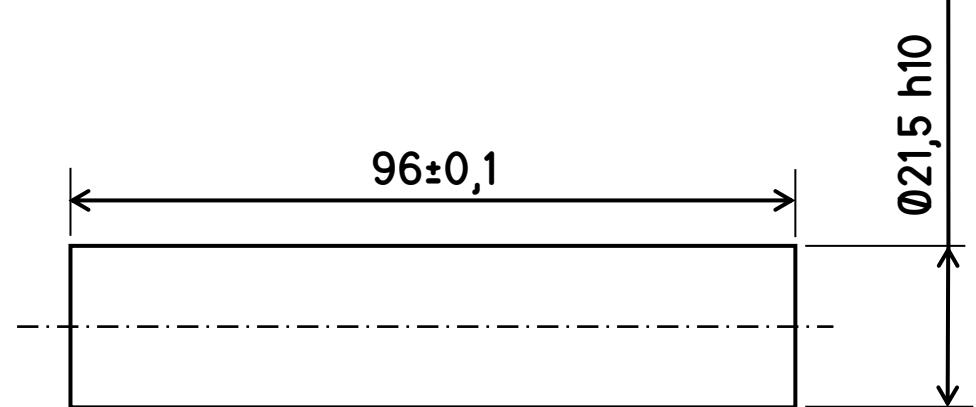
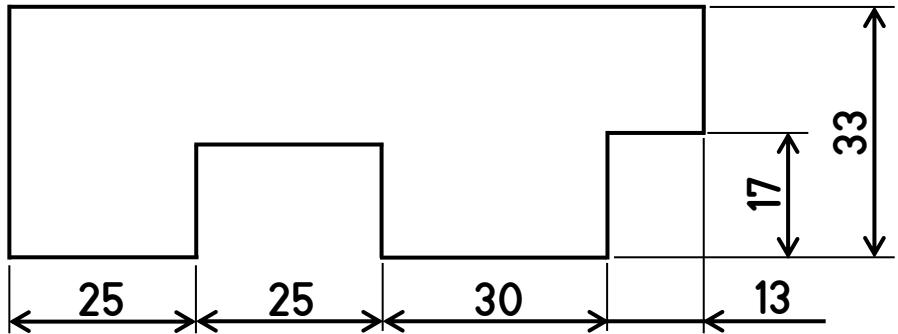
Exercice - *Quelles vues sont utiles ?*



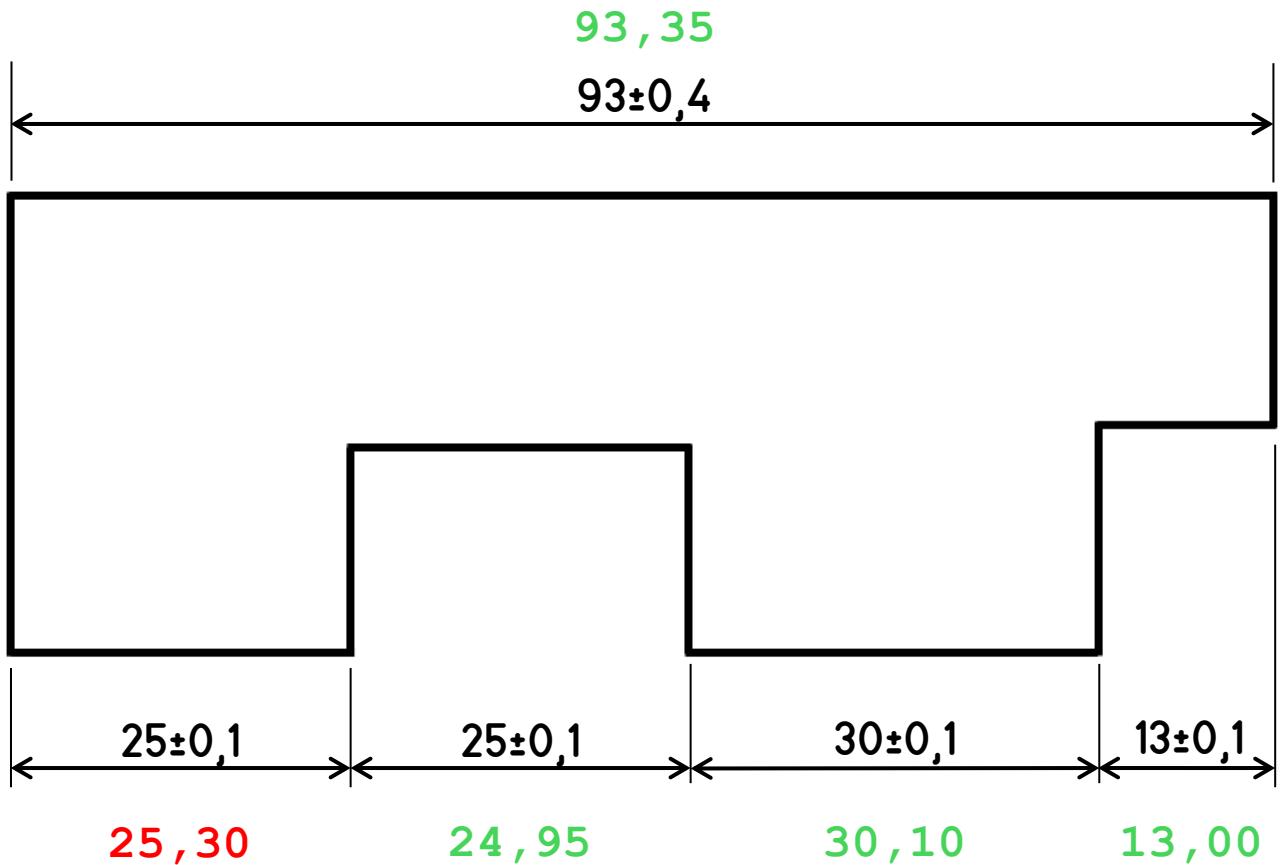
app.wooclap.com/COMGRAPH1

II. Cotation

Rappel : coter un plan



Rappel : coter de manière suffisante

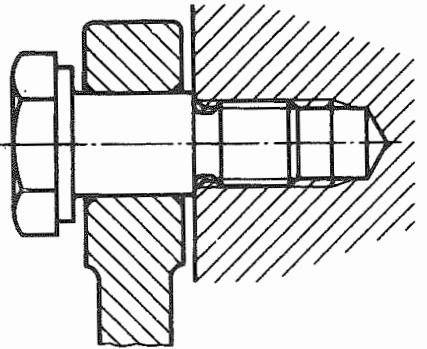


Redondance !

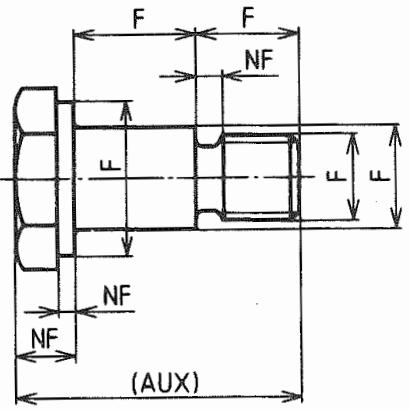
Les tolérances respectées dépendront des opérations de fabrication !

Notion de cotes fonctionnelles.

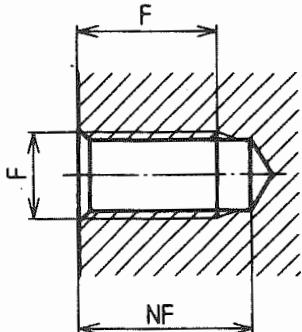
Rappel : choisir une cote



a) Design requirement



b) Shoulder screw



c) Threaded hole

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

Priorité aux cotes fonctionnelles.

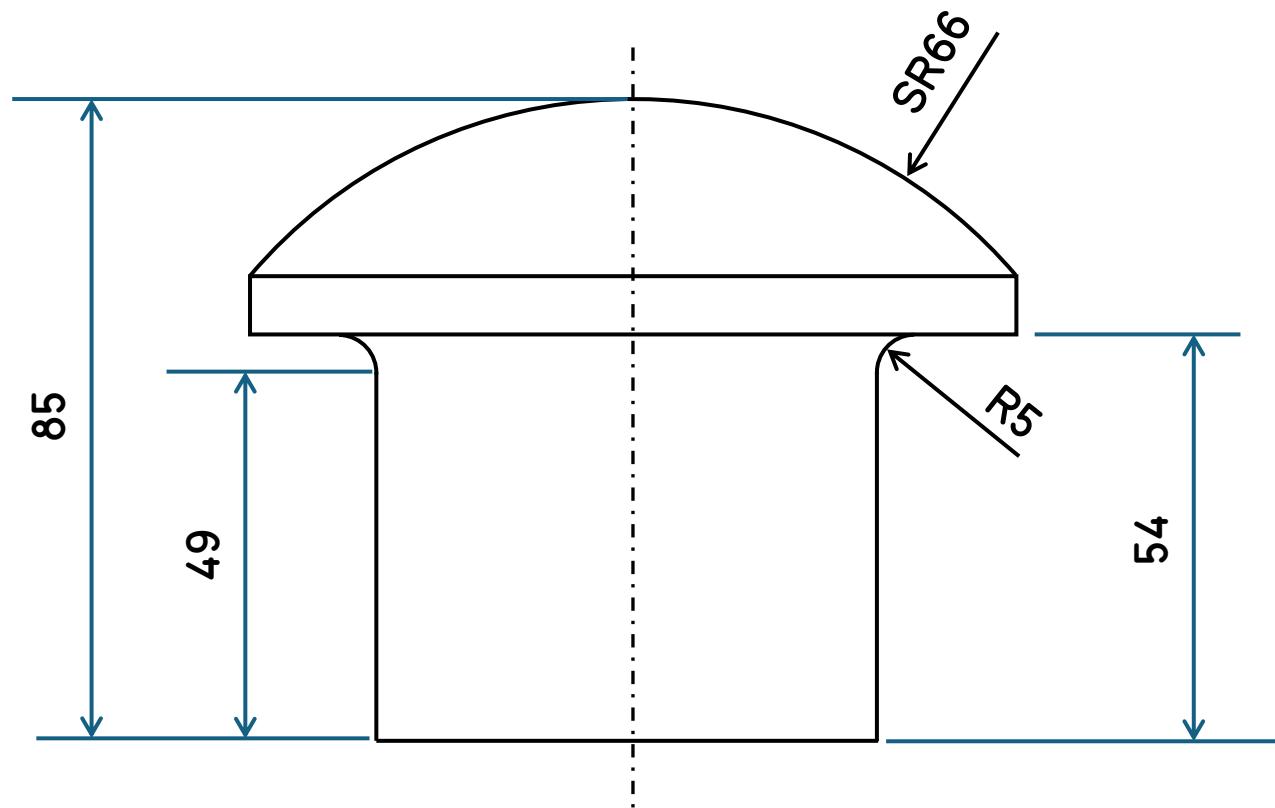
Légende :

F : cote fonctionnelle

NF : cote non-fonctionnelle

AUX : dimension auxiliaire

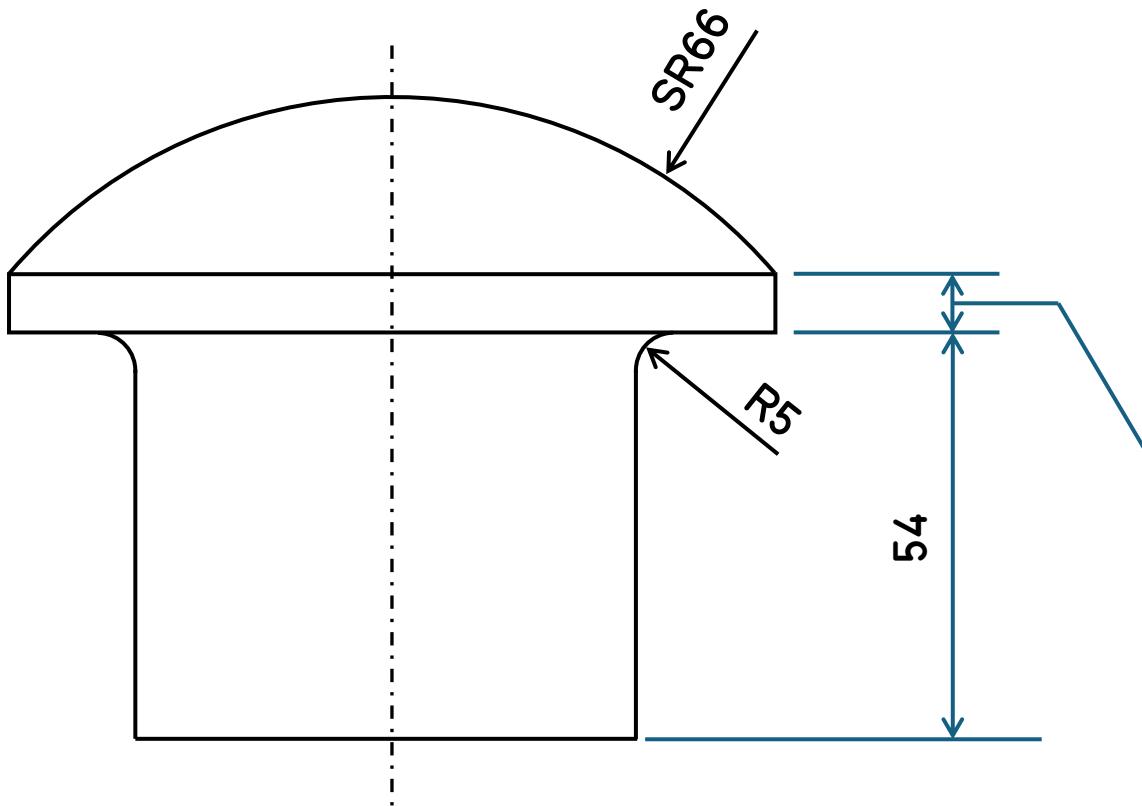
Rappel : choisir une cote



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

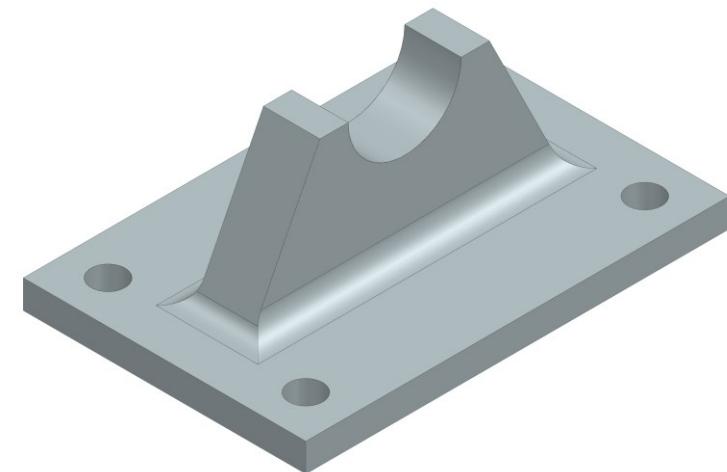
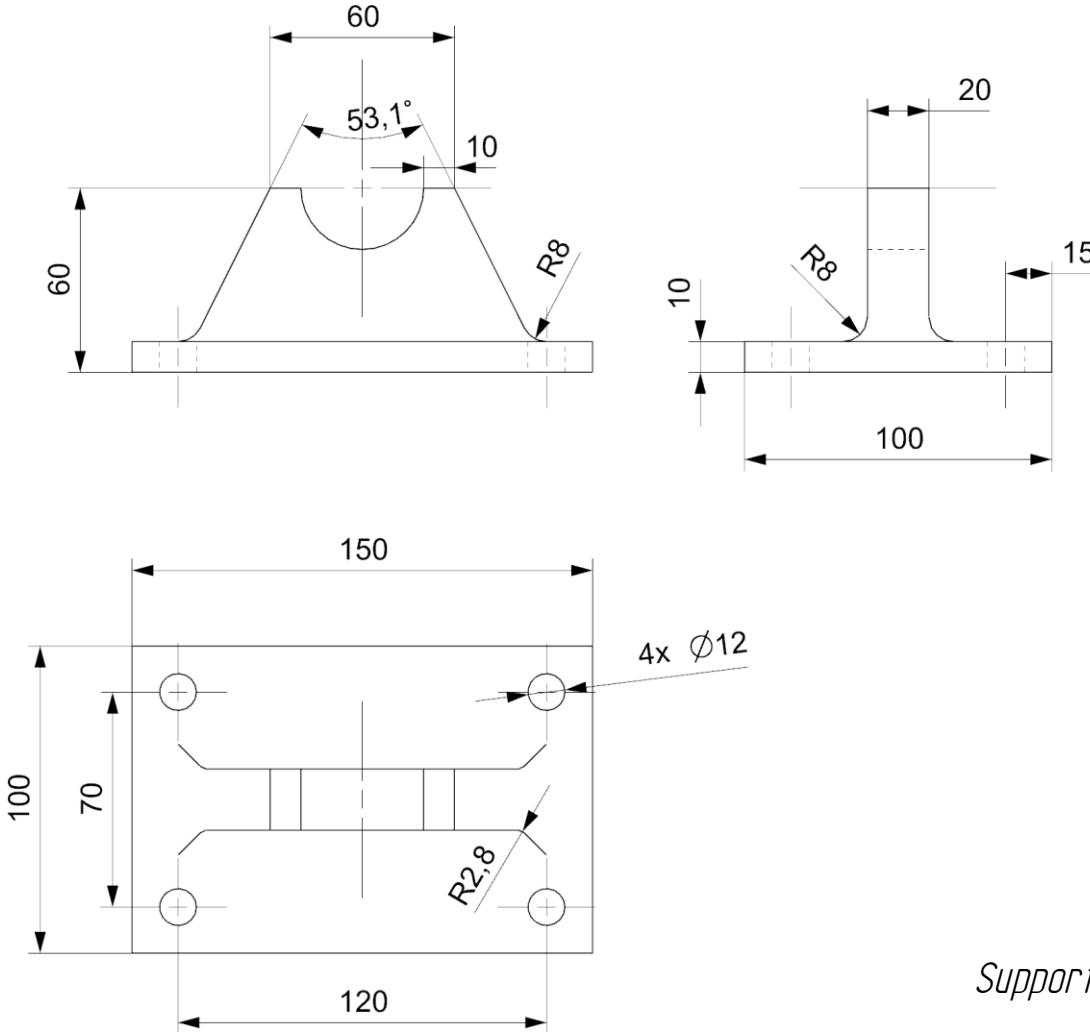


Recommandé : une cote mesurable

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

6,892720131...

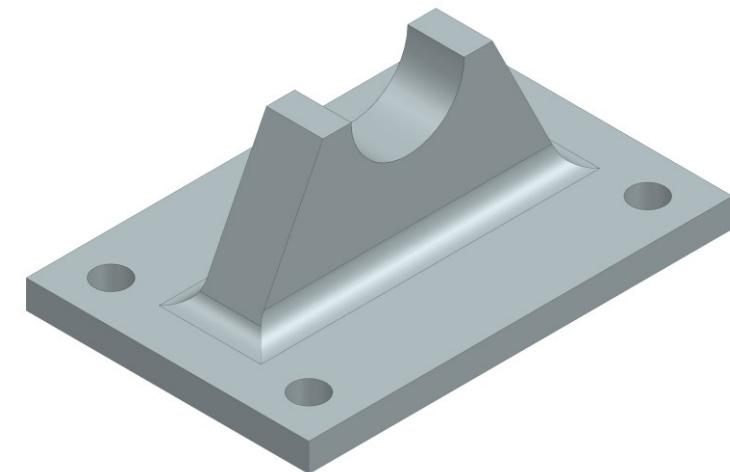
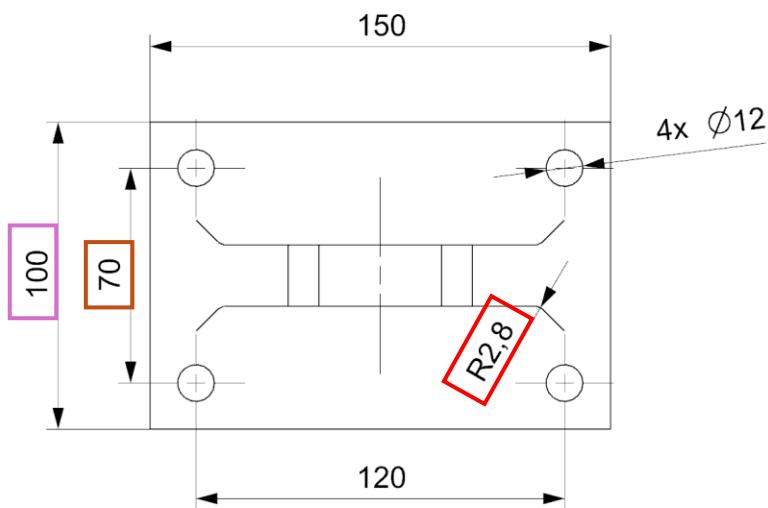
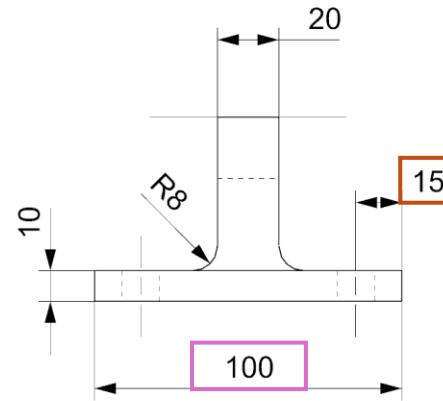
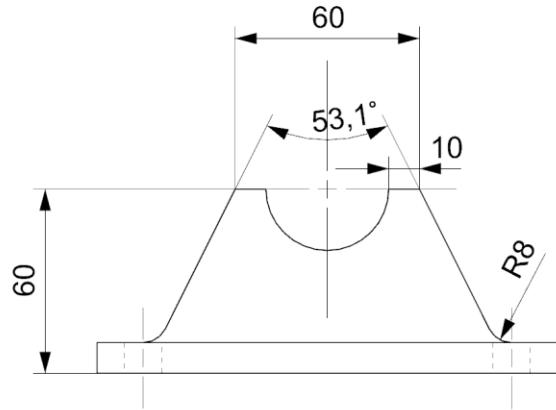
Exercice - Quelles cotes sont mal choisies ?



Support roulement - partie inférieure

Exercice - Quelles cotes sont mal choisies ?

Comment
determiner le
diamètre de l'axe ?



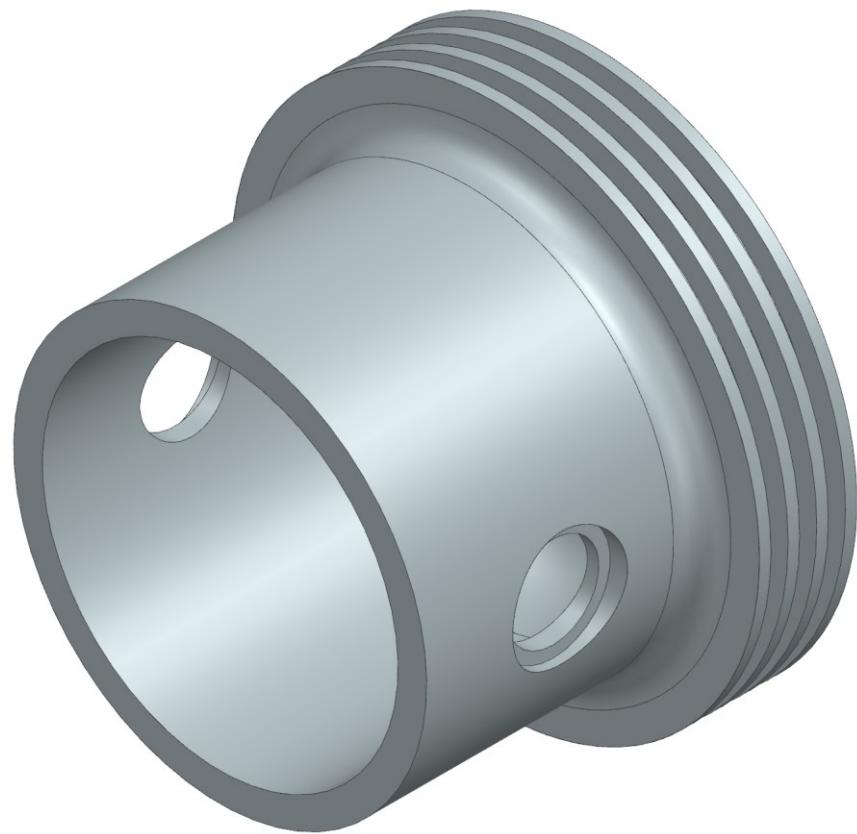
Support roulement - partie inférieure

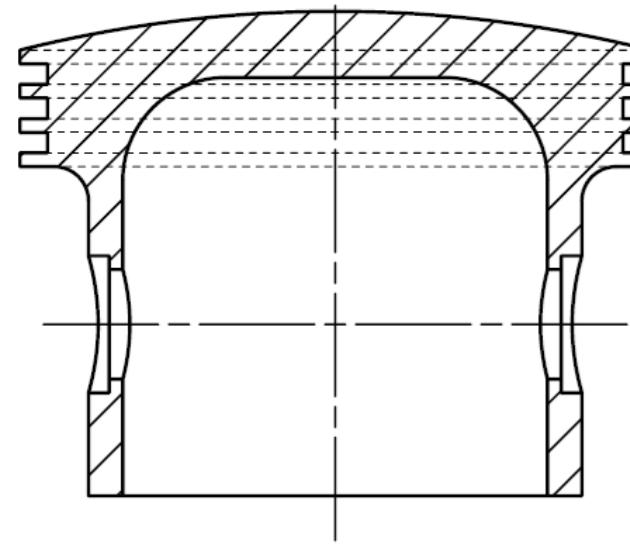
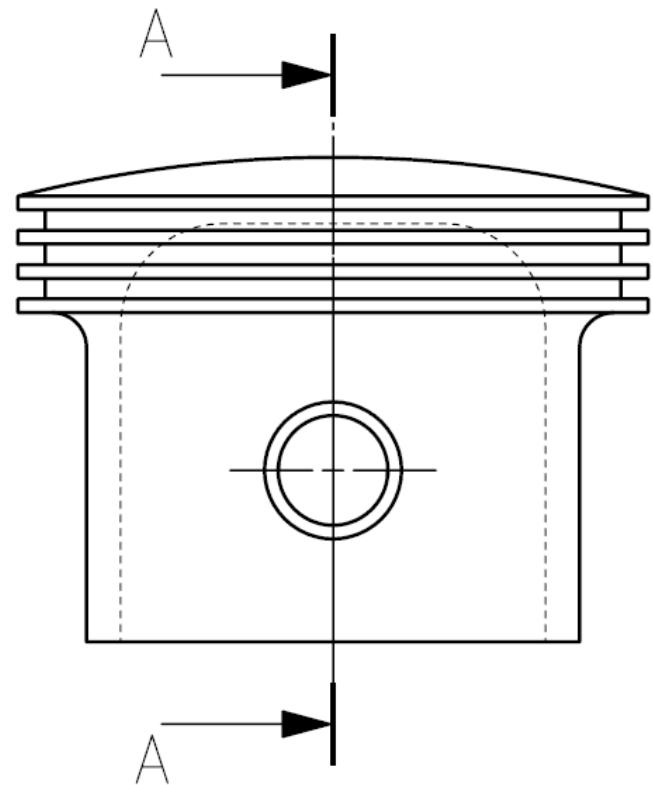
Exercice - Quel(s) plan(s) est/sont correct(s) ?



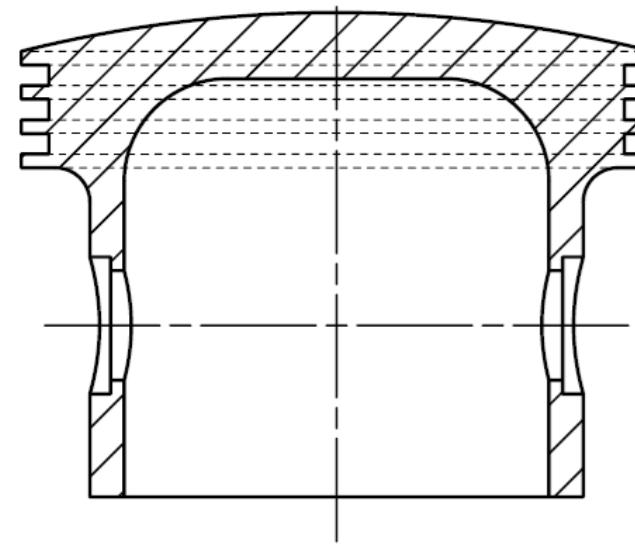
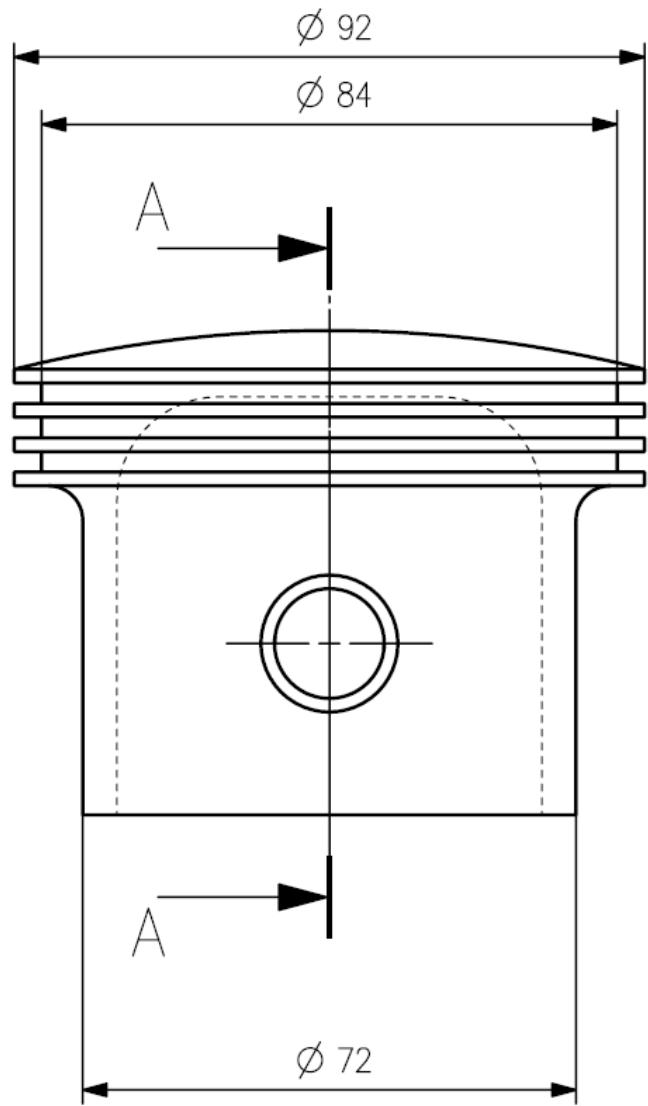
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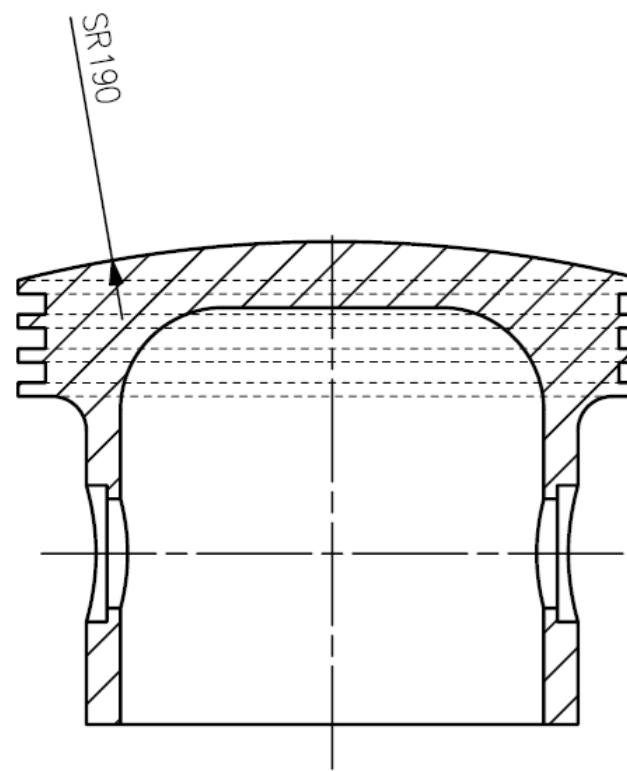
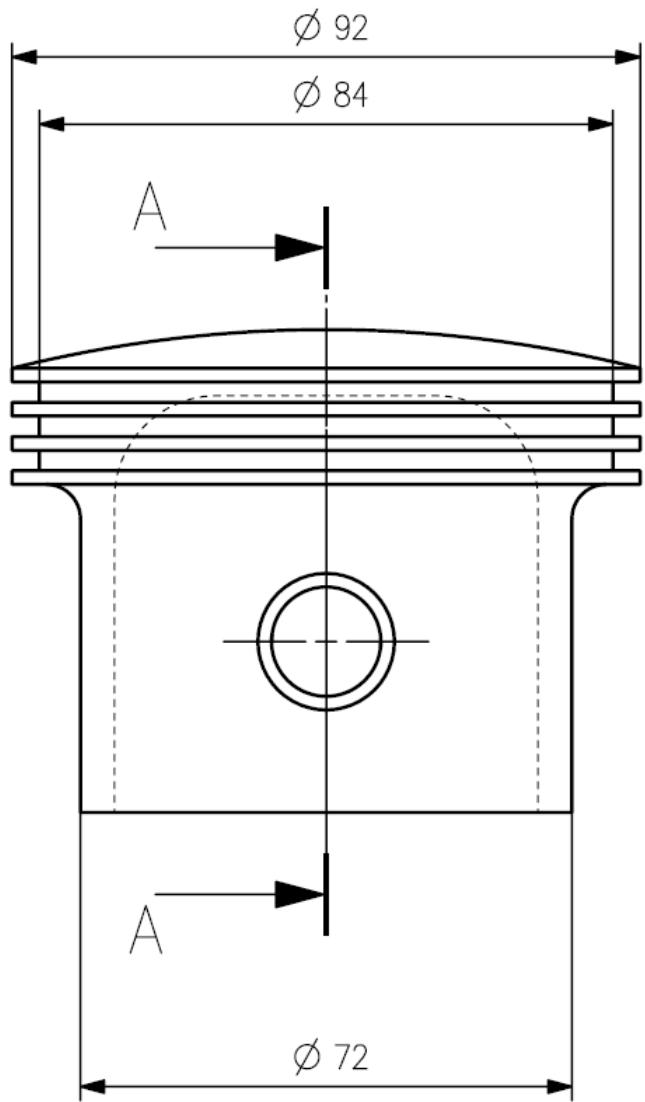
Exercice - *Faire le plan de la pièce suivante : piston*



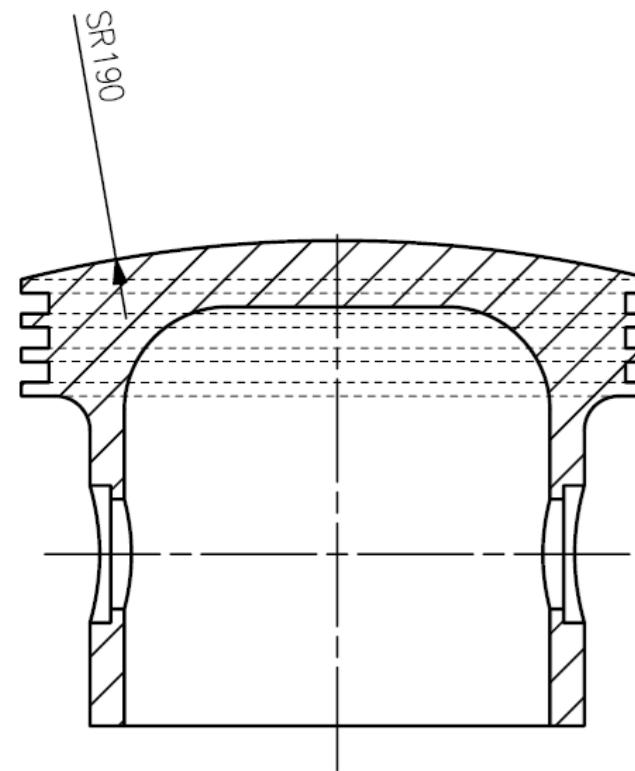
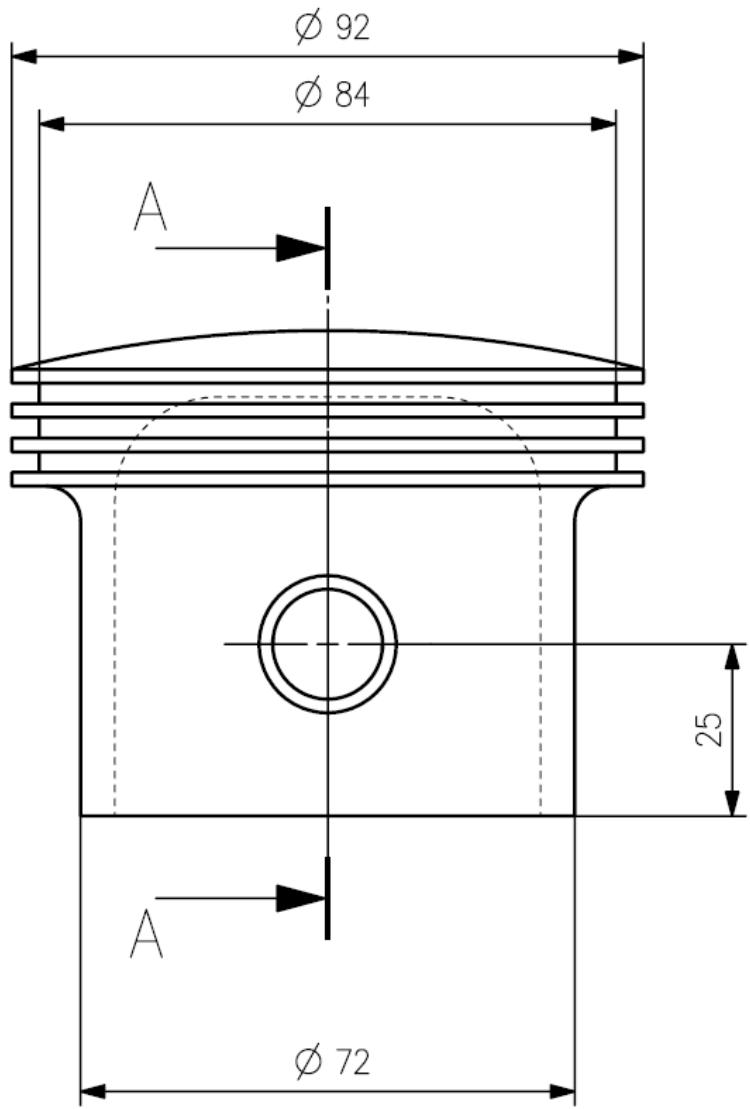


COUPE A-A





COUPE A-A



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