

DESENHO TÉCNICO PARA QUÍMICOS (SEM 0574)

Notas de Aulas v.2020

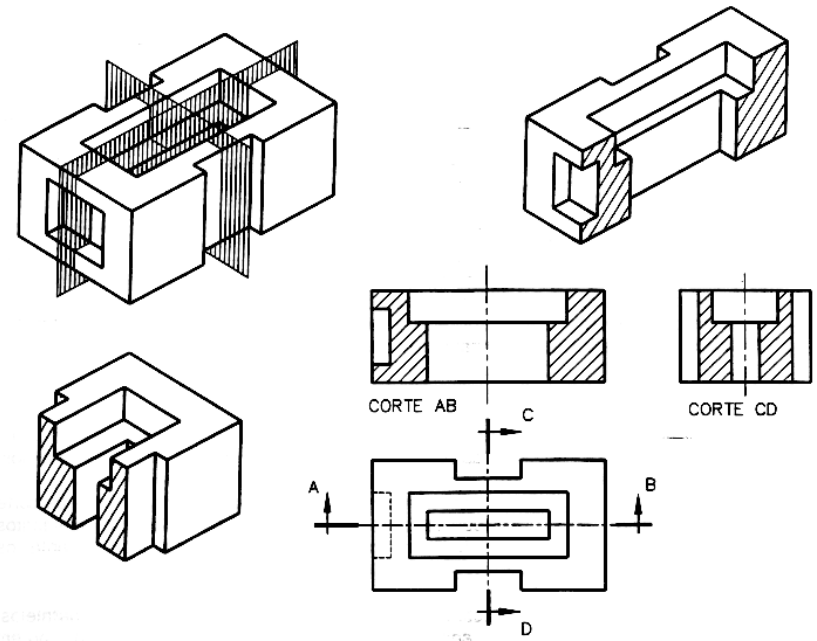
Aula 04 – Cortes, hachuras, semi-cortes

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Prof. Jaime Duduch
Profa. Luciana Montanari
Prof. Renato Jasinevicius

CORTE

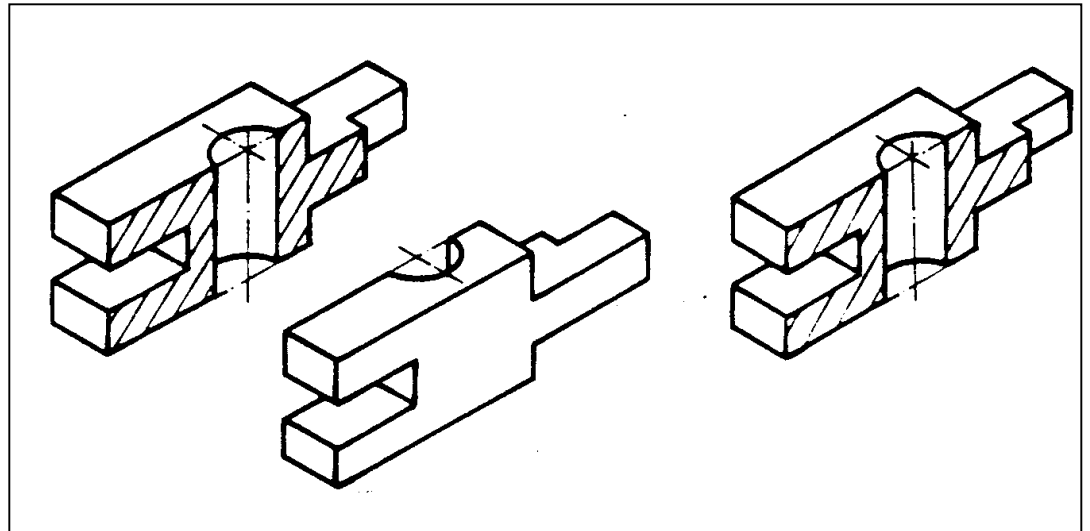
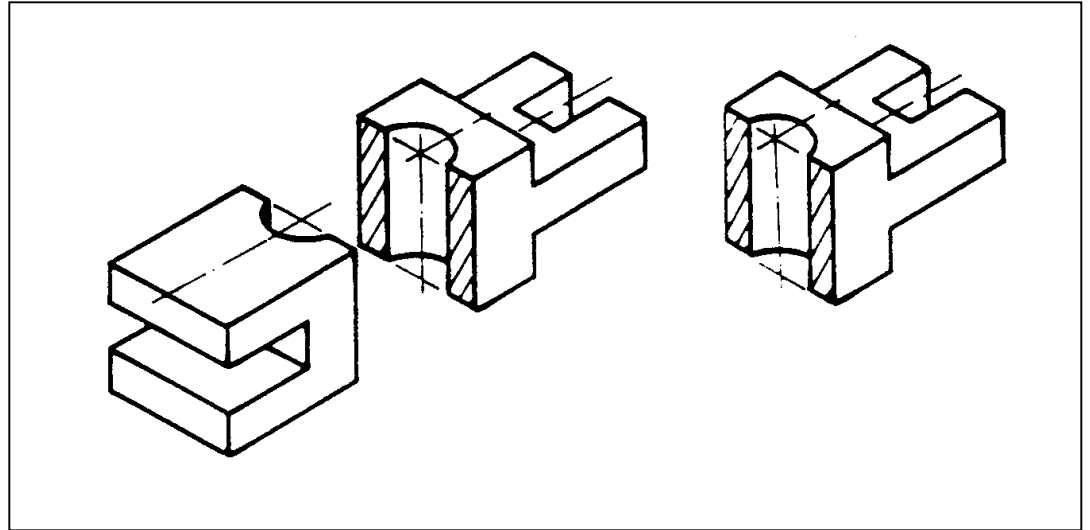
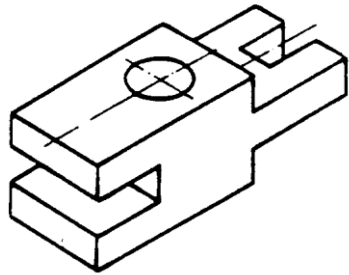
Corte é a denominação dada à representação de um produto seccionada por um ou mais planos virtuais (planos secantes). No corte se representa tudo o que está atrás do plano secante, sendo que as linhas que estavam invisíveis nas vistas ortogonais passam a ficar visíveis.

É um recurso muito utilizado para representar mais efetivamente detalhes internos de componentes ou montagens.



Imagens: Leitura e Interpretação de Desenho Técnico Mecânico. Mecânica. Telecurso 2000.

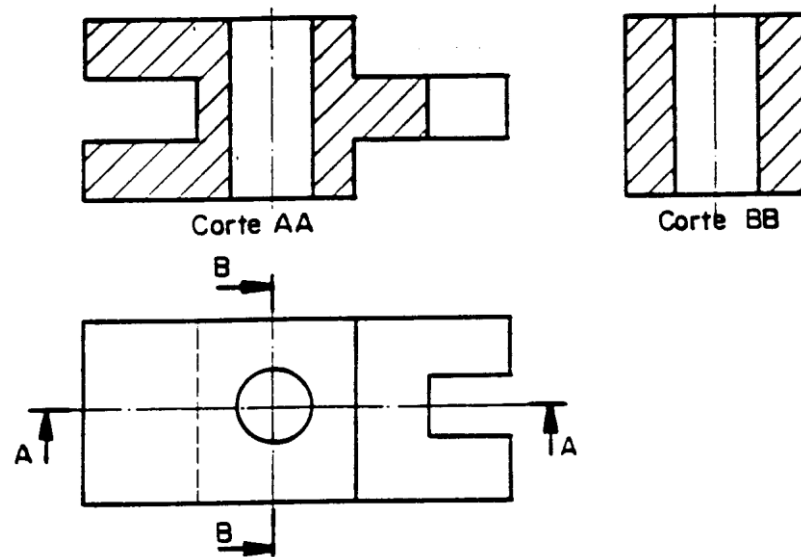
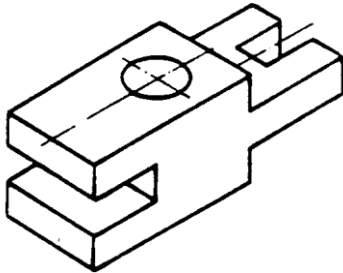
CORTE



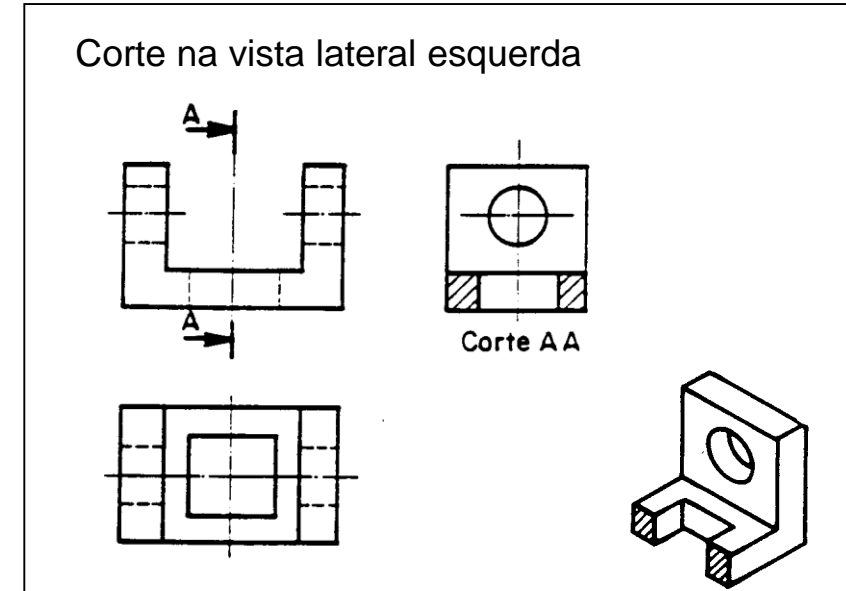
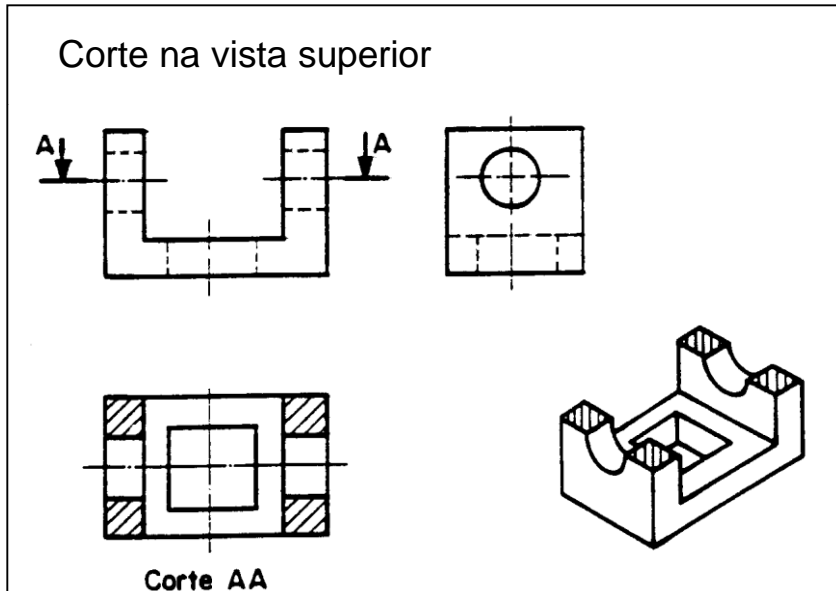
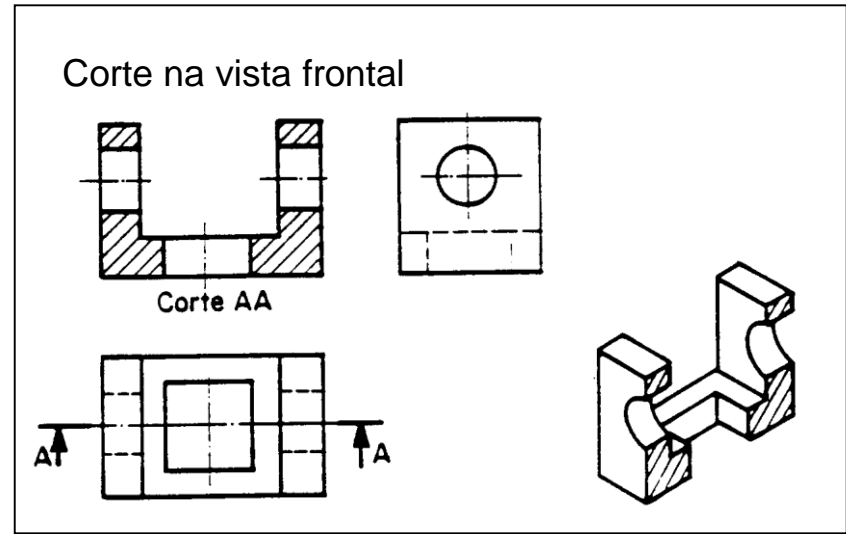
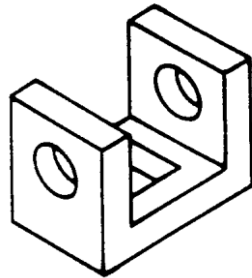
CORTE

Identifica-se o sentido de observação com setas acompanhadas de letras

- A expressão corte AA é colocada abaixo da vista hachurada;
- As vistas não atingidas pelo corte permanecem com todas as linhas;
- Na vista hachurada, as linhas tracejadas podem ser omitidas desde que isto não dificulte a leitura do desenho

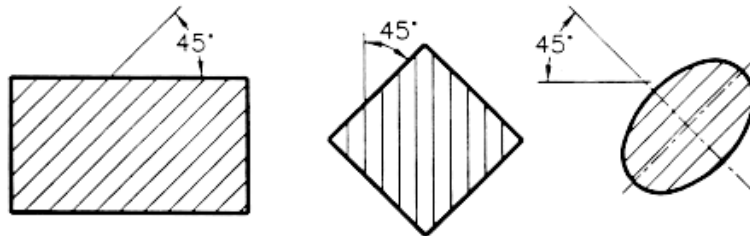


CORTE



HACHURAS

Na projeção em corte, a superfície imaginada cortada é preenchida com hachuras que são linhas estreitas geralmente traçadas a 45° , porém em alguns casos é permitido uma inclinação de 30° .

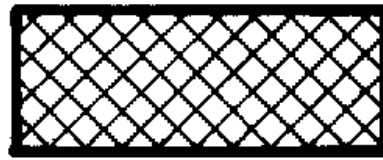


HACHURAS

As hachuras também mostram os tipos de materiais.



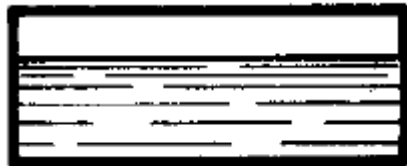
Geral e Metais



Elastômeros, vidros,
cerâmicas e rochas



Concreto



Líquido



Madeira



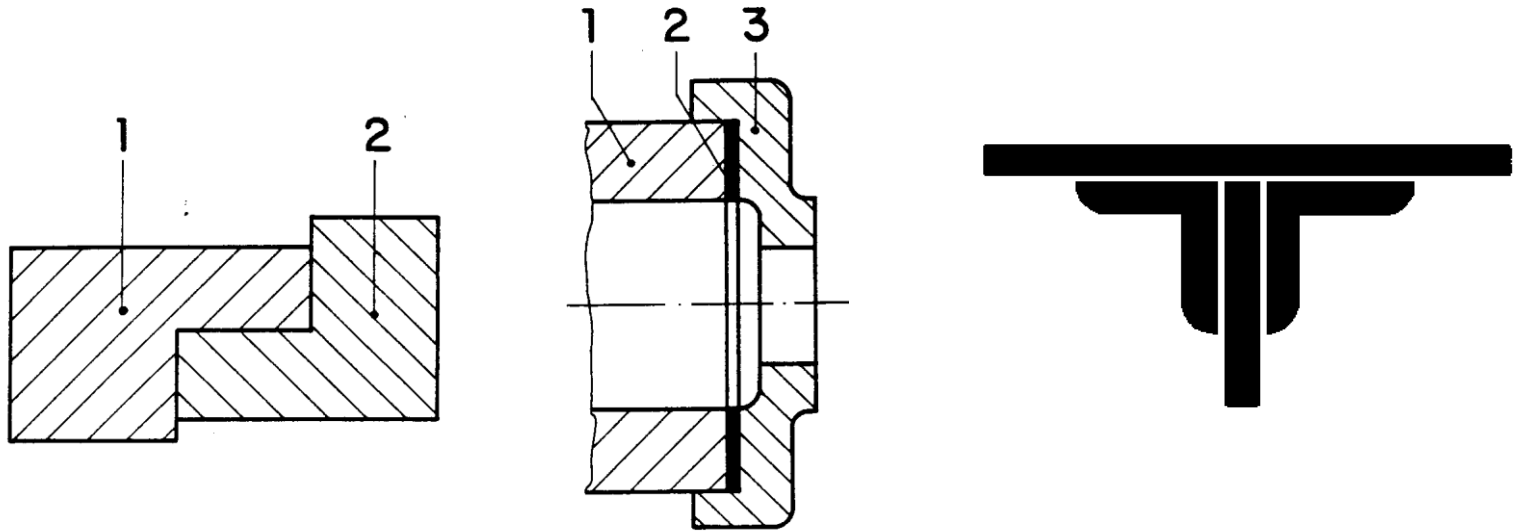
Terra

Imagens: Norma ABNT NBR 12.298/1995.

HACHURAS

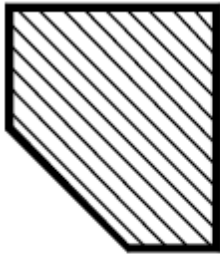
As hachuras em uma peça composta (unidas ou montagem), são feitas em direções diferentes.

Cortes em componentes de paredes muito delgadas, como por exemplo: chapas, juntas, guarnições, perfis estruturais, devem ser representadas em negrito com espaçamento em branco.

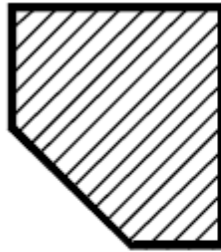


HACHURAS

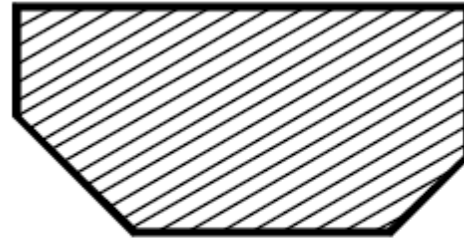
As hachuras não devem ter a mesma inclinação de arestas das peças, nem das cotas. Também não devem interceptar dimensões.



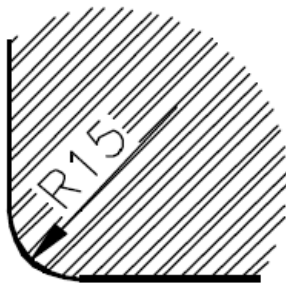
Errado



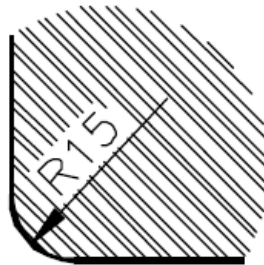
Correto



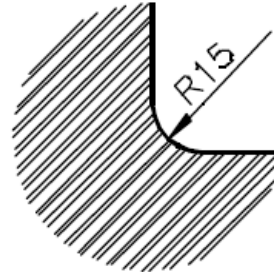
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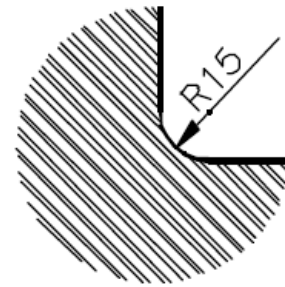
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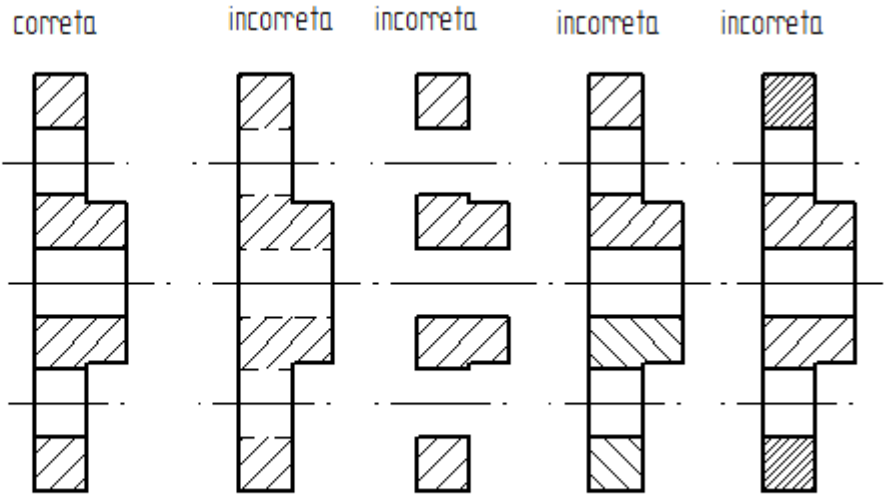
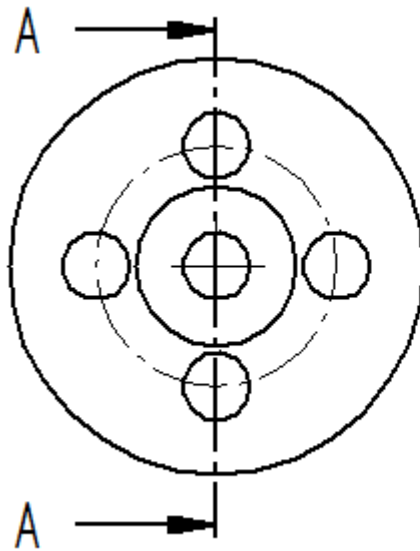
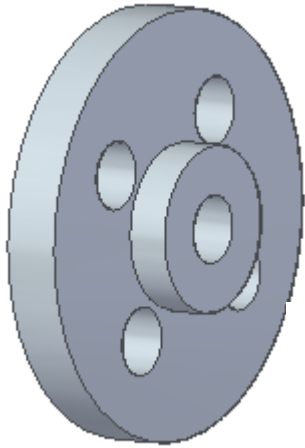
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Correto

Imagens: Vale, Frederico A. M. do. Desenho de Máquinas. 2004/02.

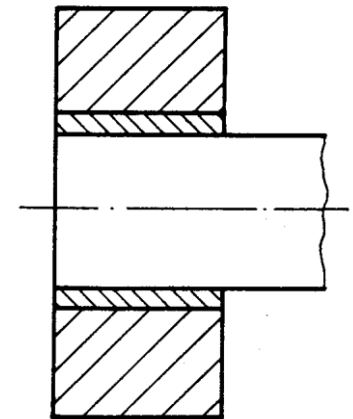
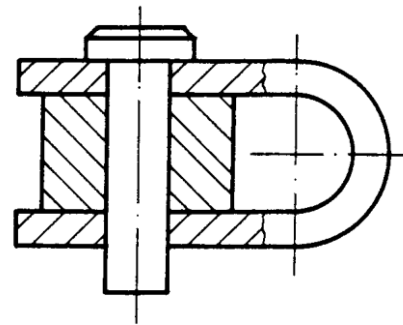
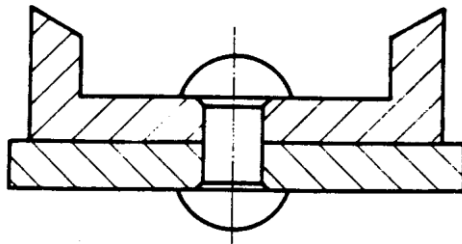
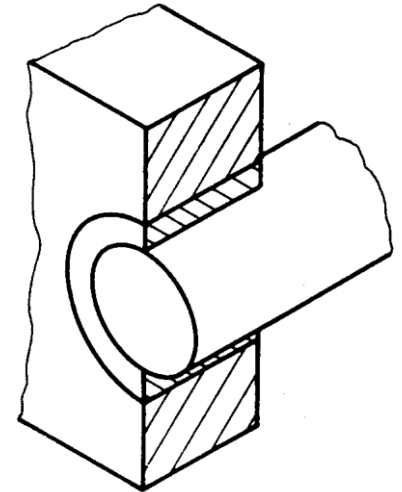
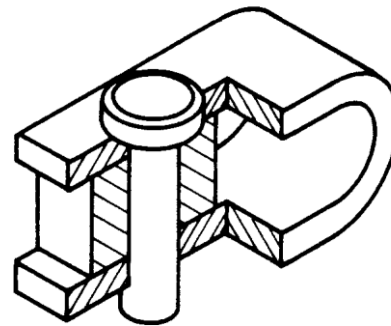
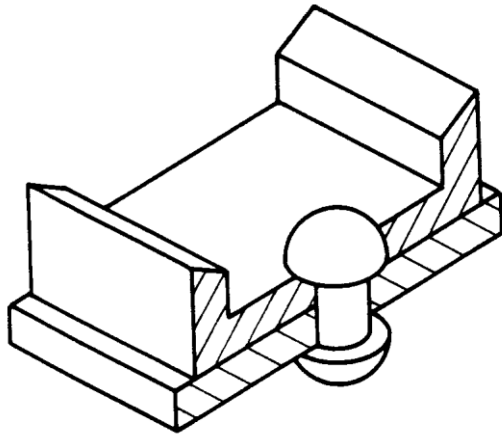
CORTE



Corte AA

ELEMENTOS NÃO CORTADOS

Alguns elementos de máquinas não são cortados quando atingidos pelo plano secante.

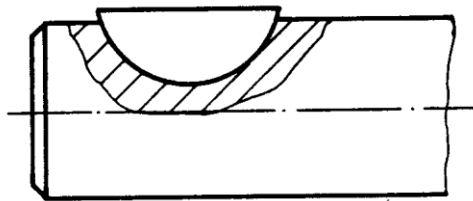
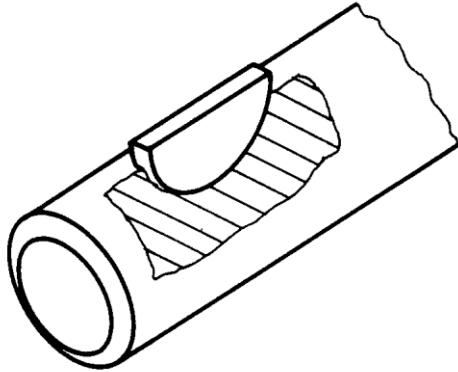


Rebites

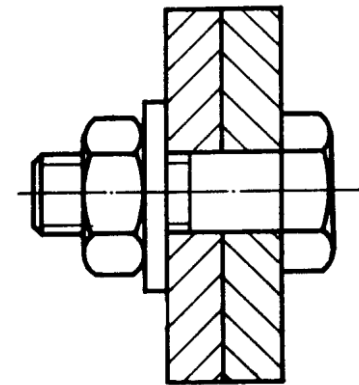
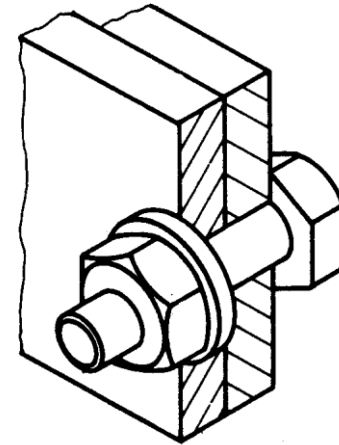
Pinos

Eixos

ELEMENTOS NÃO CORTADOS

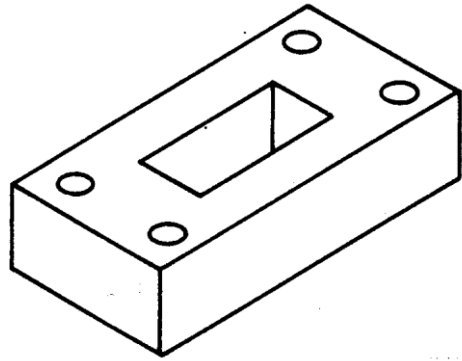


Chavetas

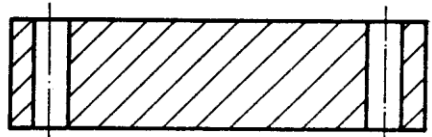


Parafusos, porcas e arruelas

CORTE: plano secante

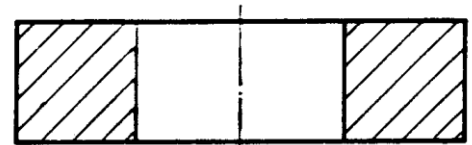


Pelos furos

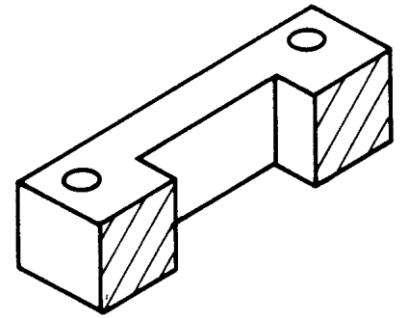
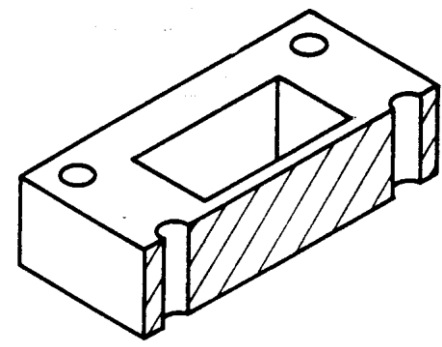
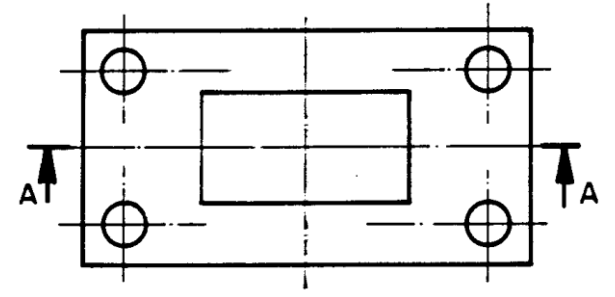
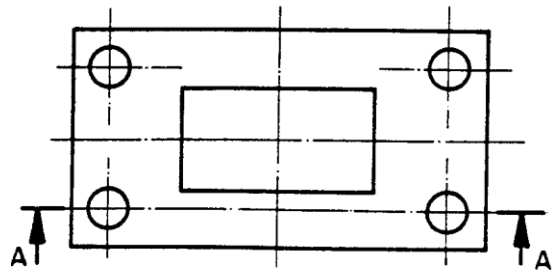


Corte AA

Pelos centro

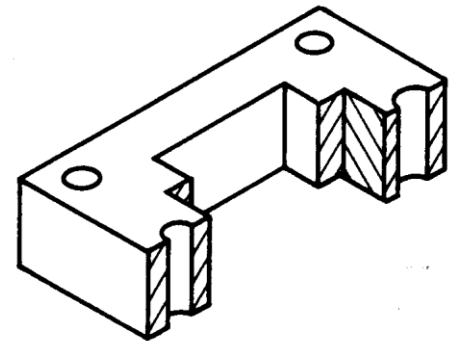
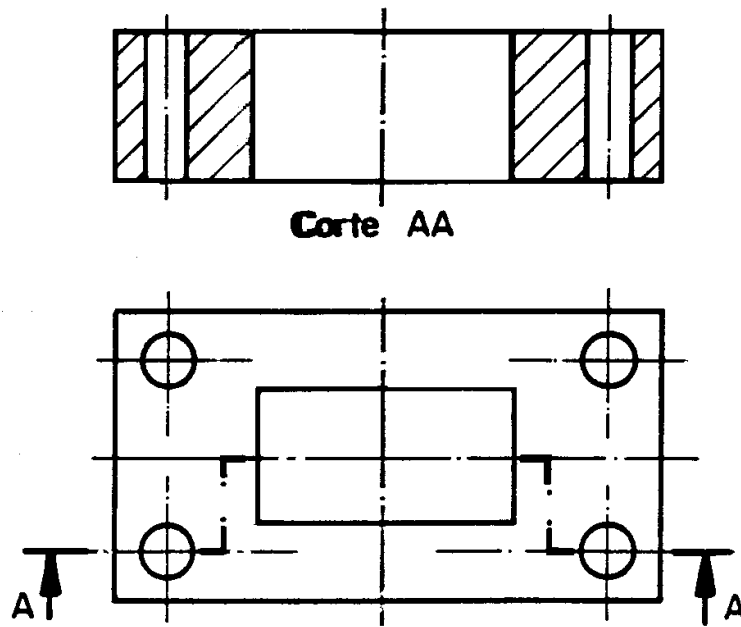


Corte AA



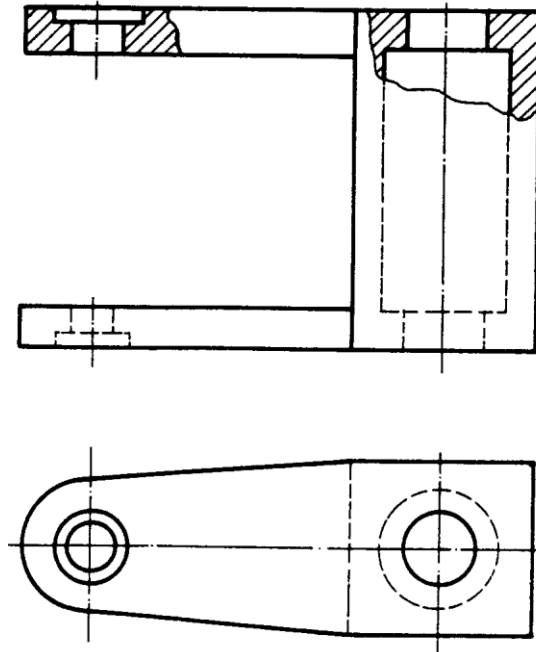
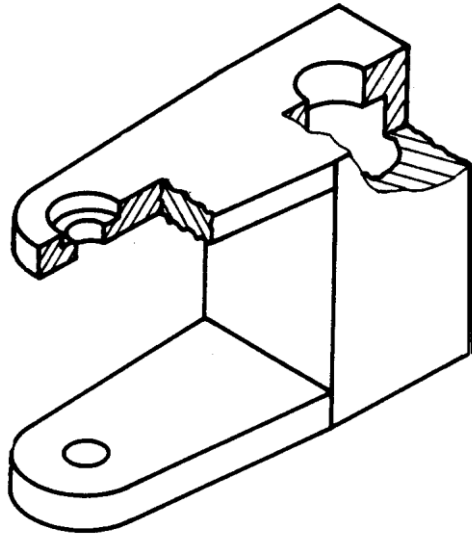
CORTE COMPOSTO (Em desvio)

Utilizado quando se deseja representar detalhes em diferentes planos de corte.



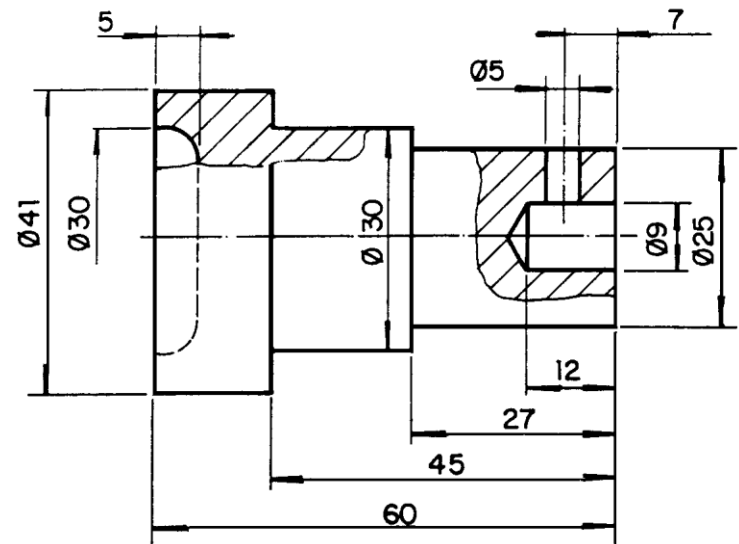
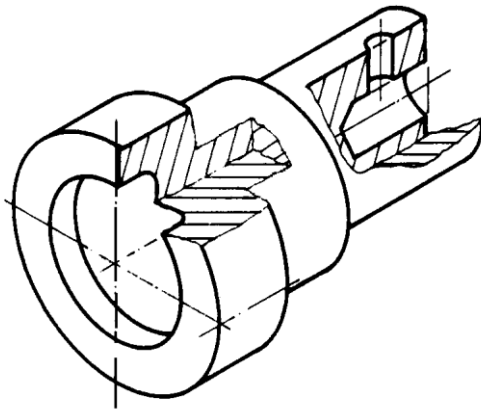
CORTE PARCIAL

É um corte utilizado apenas para mostrar determinados detalhes internos na projeção. Para limitar a parte cortada, usa-se a linha de ruptura (sinuosa estreita)



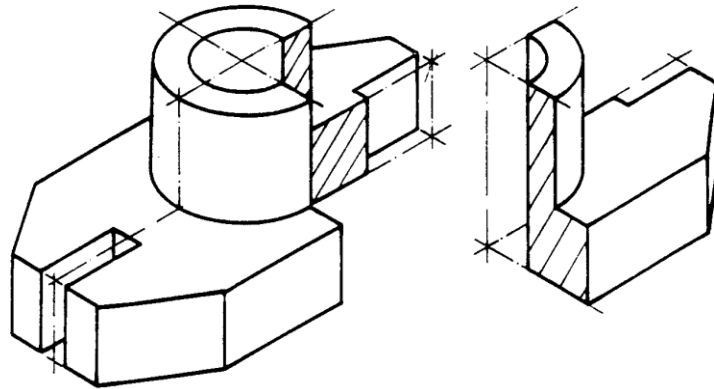
Fonte: Apostila Desenho Mecânico. Desenho com instrumentos. Convênio SENAI/São Paulo

CORTE PARCIAL



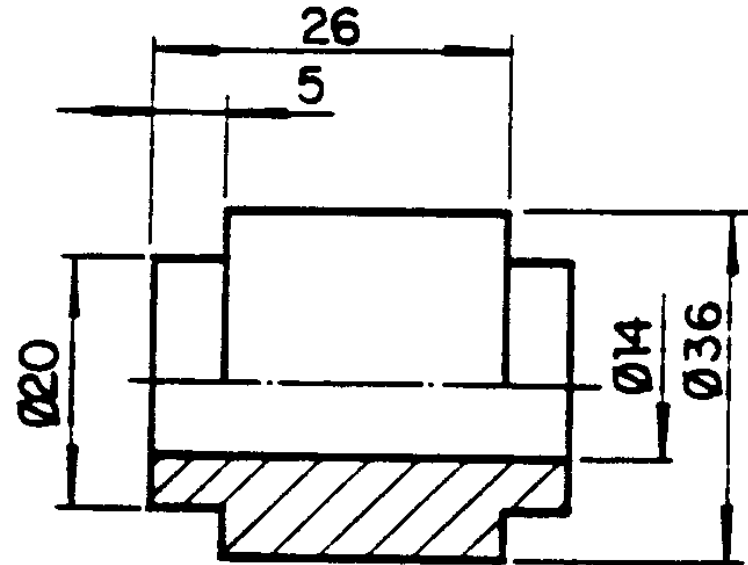
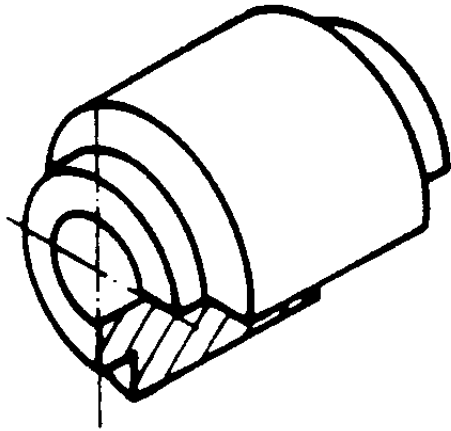
MEIO-CORTE

O meio-corte é empregado no desenho de peças simétricas, no qual aparece somente meia vista em corte. O meio corte apresenta a vantagem de indicar, em uma só vista, as partes internas e externa da peça.



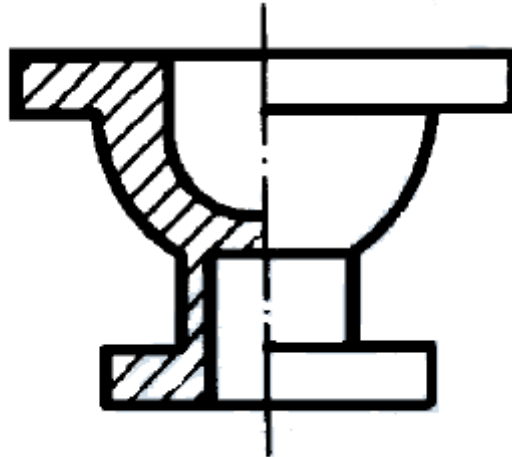
MEIO-CORTE em vista única

Em peças com a linha de simetria horizontal, o meio corte é representado na parte **INFERIOR** da linha de simetria.

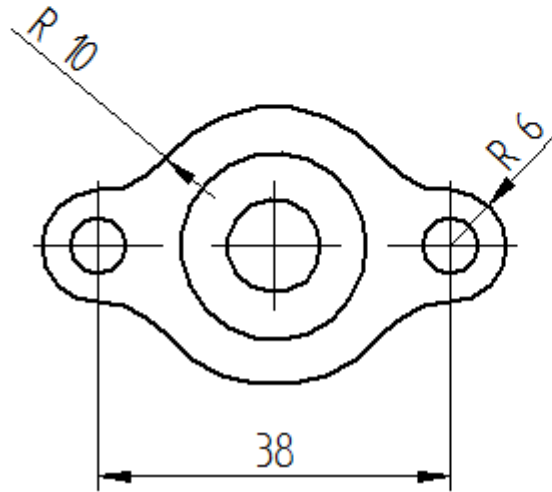
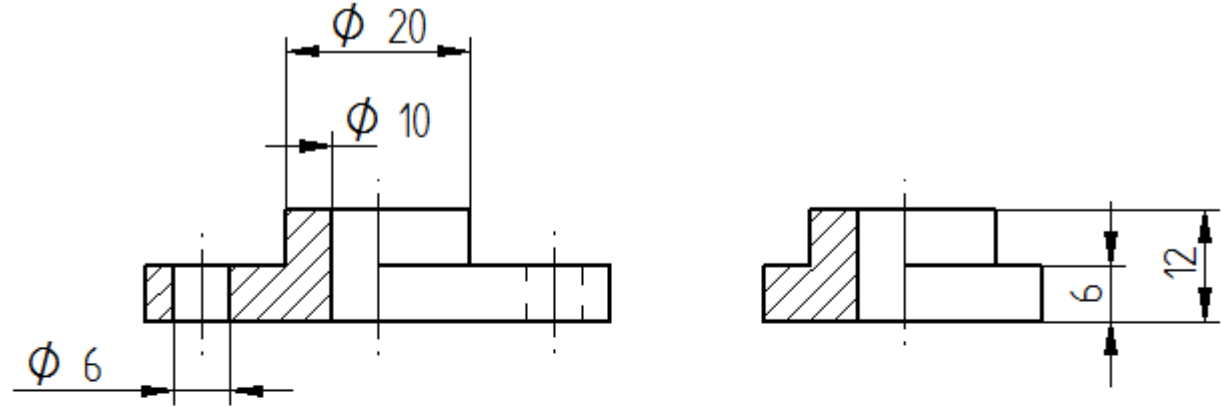
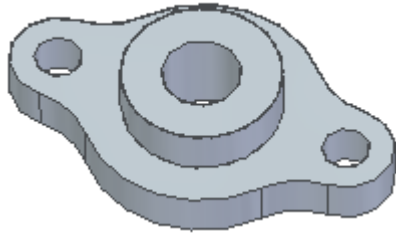


MEIO-CORTE

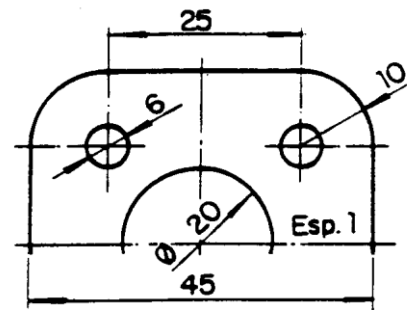
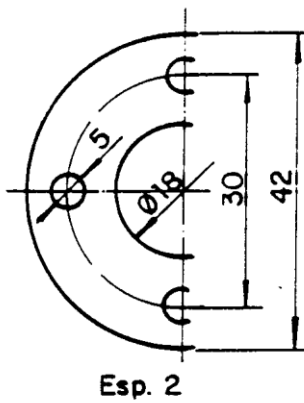
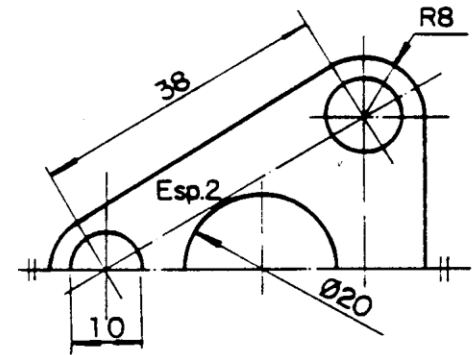
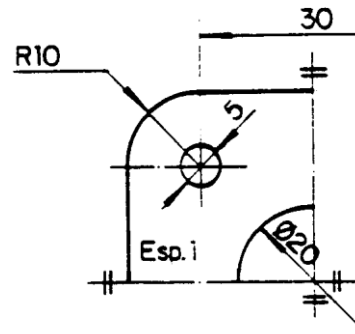
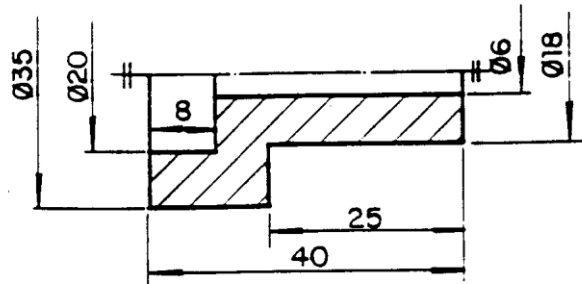
Em peças com a linha de simetria vertical, o meio corte é representado À
ESQUERDA da linha de simetria.



MEIO-CORTE - Duas representações em meio corte no mesmo desenho



MEIO-CORTE - Representação simplificada de peças simétricas




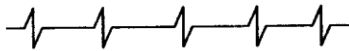


Exercício 27 – Complete

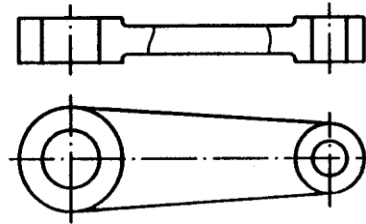
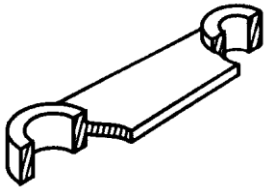
Nome: _____

Nº _____ Turma _____

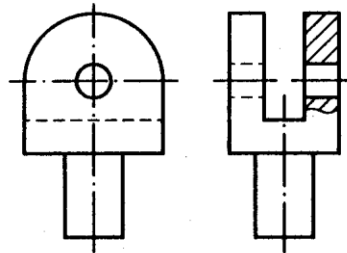
Assinale com um X as linhas usadas em desenhos técnicos mecânicos para indicar cortes parciais:

- a) () 
- b) () 
- c) () 
- d) () 

Analise a perspectiva e faça hachuras, no desenho técnico, nas partes maciças atingidas pelos cortes parciais.



Analise as vistas ortográficas e assinale com um X o tipo de material usado na produção da peça correspondente.

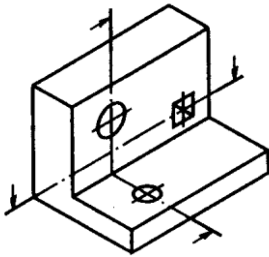


- a) () metal
- b) () plástico
- c) () cerâmica
- d) () madeira

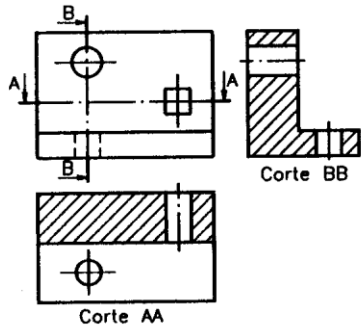
Exercício 28 – Assinale com X as vistas ortográficas em corte que correspondam ao modelo em perspectiva com a indicação de dois planos de corte.

Nome: _____

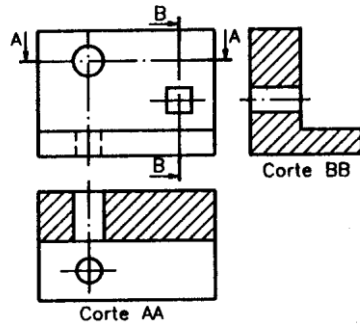
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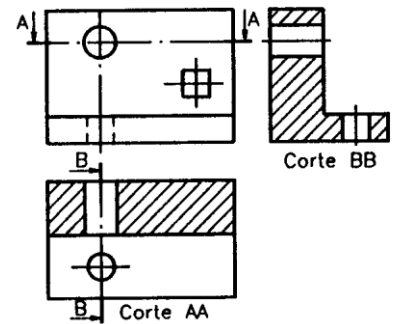
a) ()



b) ()



c) ()



Exercício 29 – Faça o desenho da peça abaixo. Decida e indique os planos de corte.

Nome: _____

Nº _____ Turma _____

