IAU 0678 DESENHO TÉCNICO

AULA 04

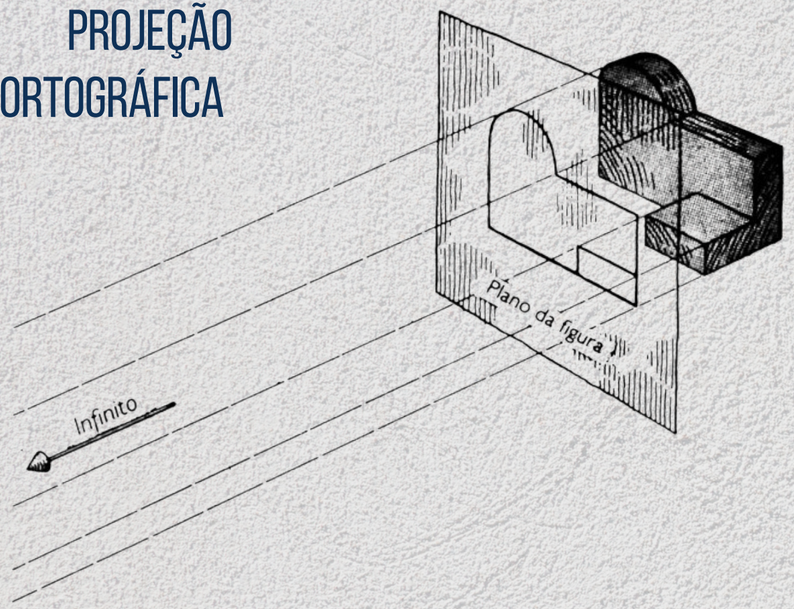
VISTAS ORTOGONAIS
CORTE TOTAL
CORTE COM DESVIO

PROF. AMANDA SABA RUGGIERO
MONITORA: BEATRIZ OTRENTE

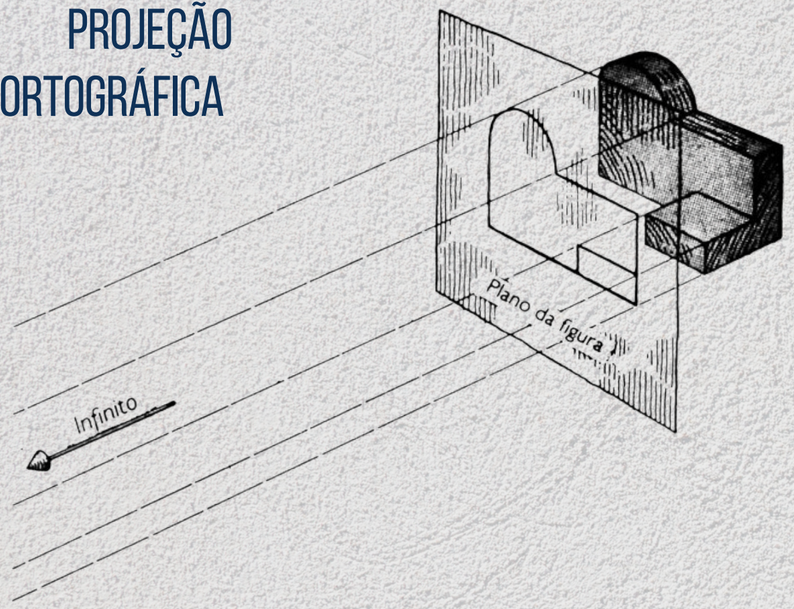
ENGENHARIA DE COMPUTAÇÃO
2023.1

VISTAS ORTOGONAIS

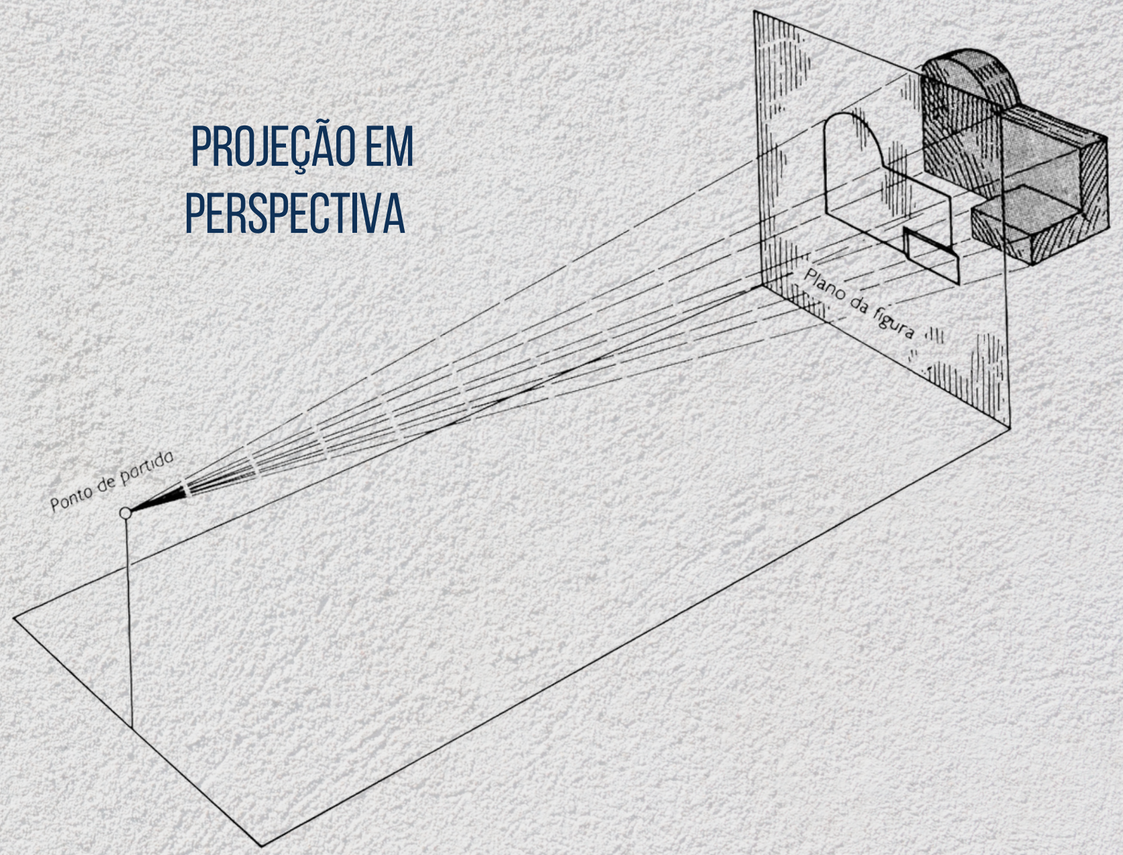
PROJEÇÃO ORTOGRÁFICA



PROJEÇÃO ORTOGRÁFICA



PROJEÇÃO EM PERSPECTIVA



NBR 10067

princípios gerais de representação em desenho técnico

condições gerais

o desenho técnico é representado na cor preta. se outras cores forem necessárias para melhor esclarecimento do desenho o seu significado deve ser mencionado em legenda.

métodos de projeção ortográfica:

a| 1^{0} diedro

b| 3^{0} diedro

NBR 10067

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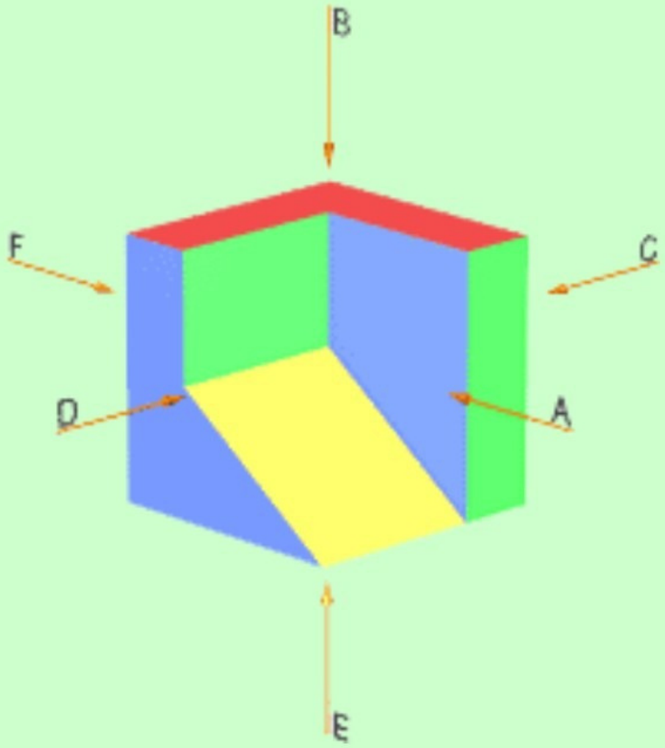
condições específicas



denominação das vistas:

A| vista frontal

B| vista superior

C| vista lateral direita

D| vista lateral esquerda

E| vista inferior

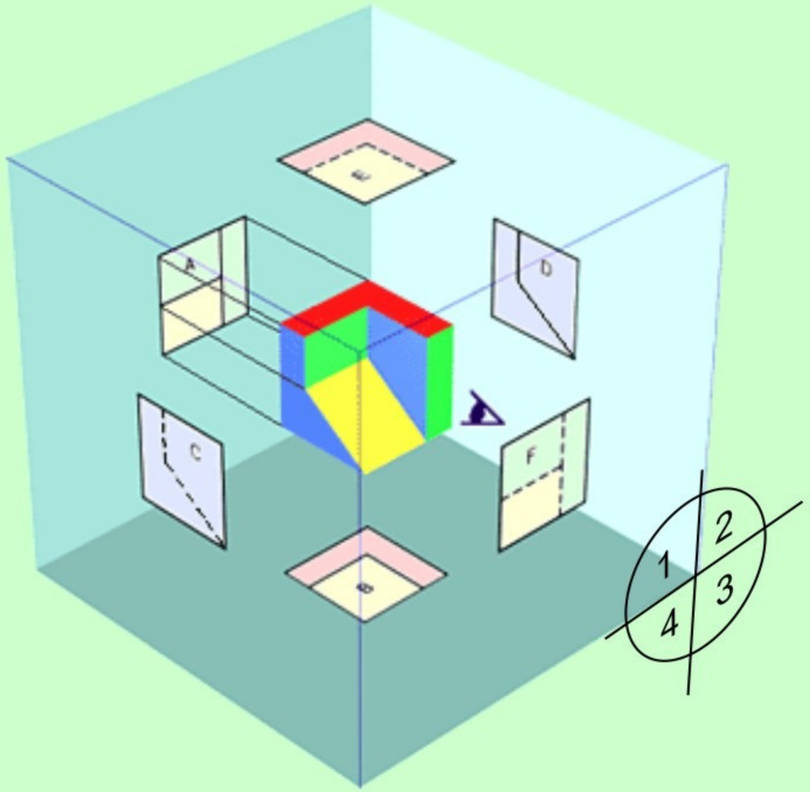
F| vista posterior

NBR 10067

princípios gerais de representação em desenho técnico

condições específicas

posição relativas das vistas no 1^{0} diedro | **sistema europeu**



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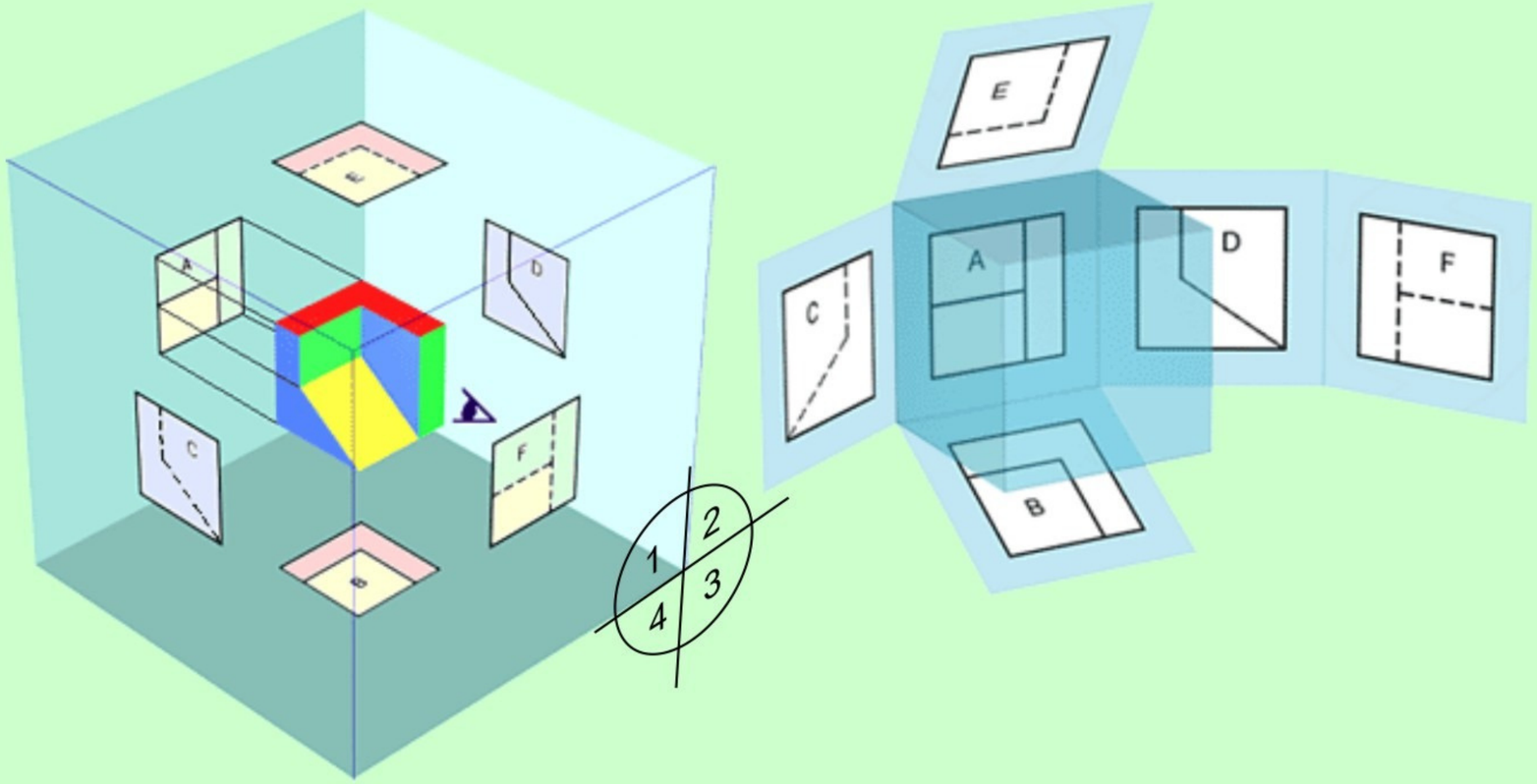
condições específicas

posição relativas das vistas no 1º diedro | **sistema europeu**



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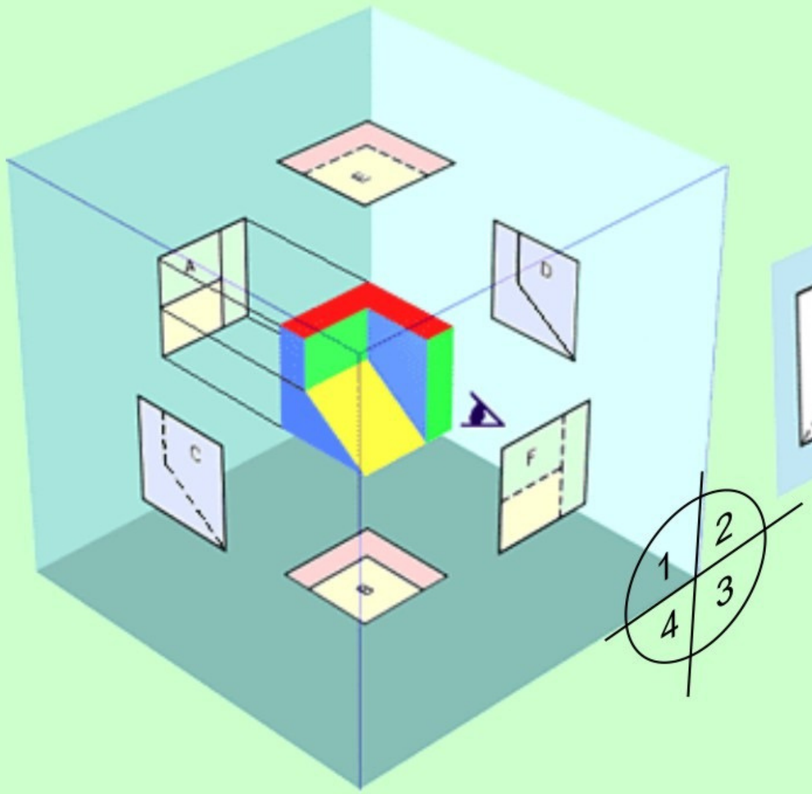

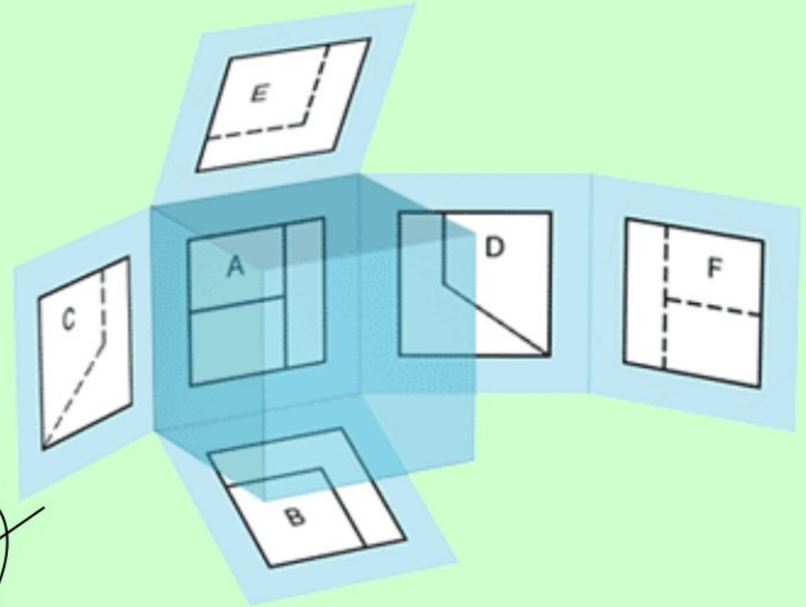

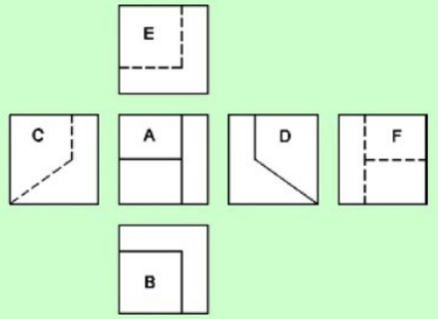

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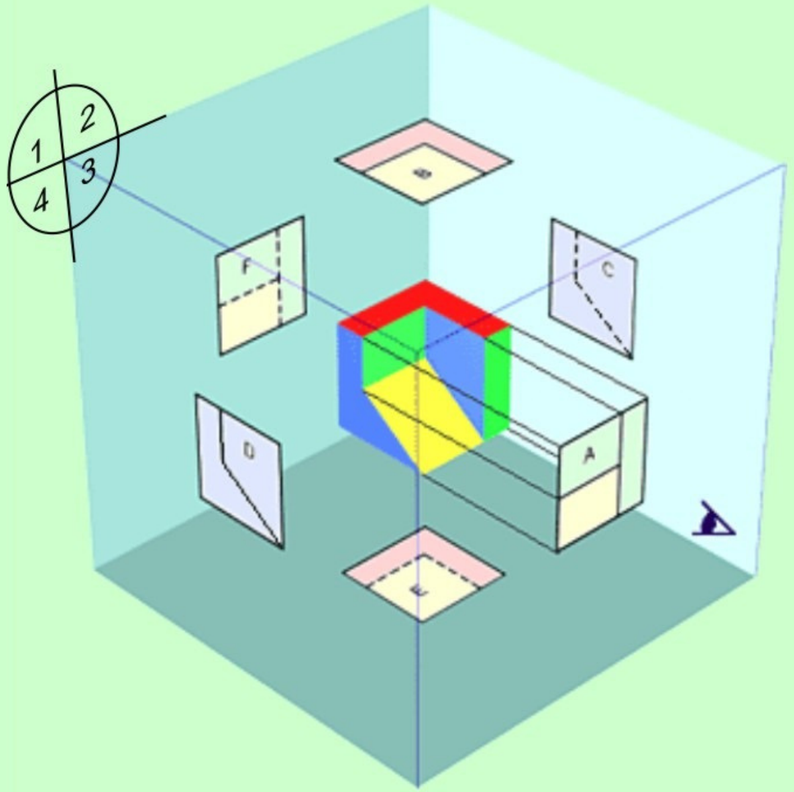
condições específicas

posição relativas das vistas no 3^0 diedro | **sistema americano**



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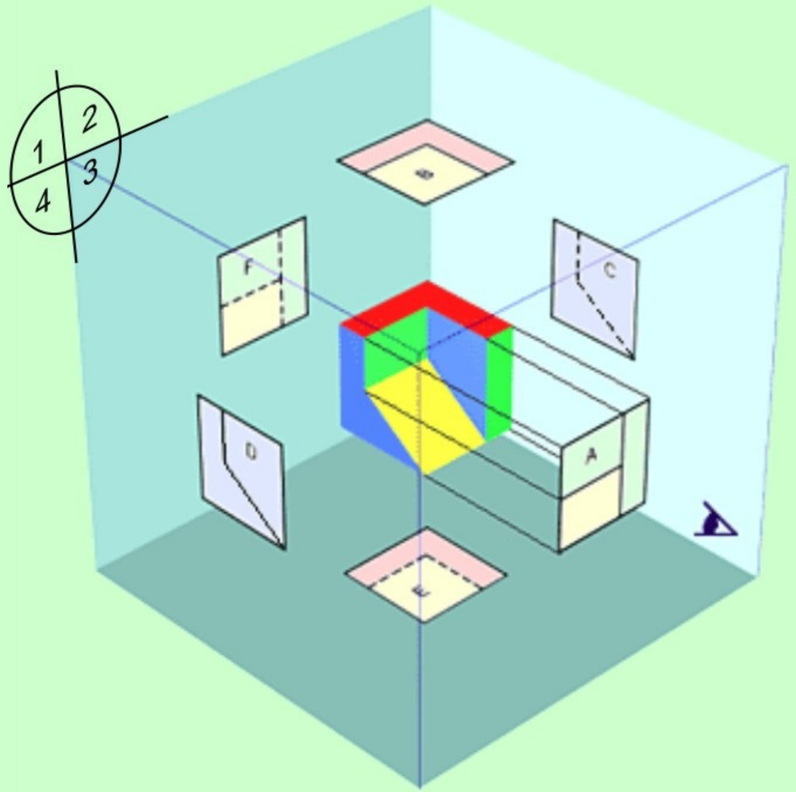
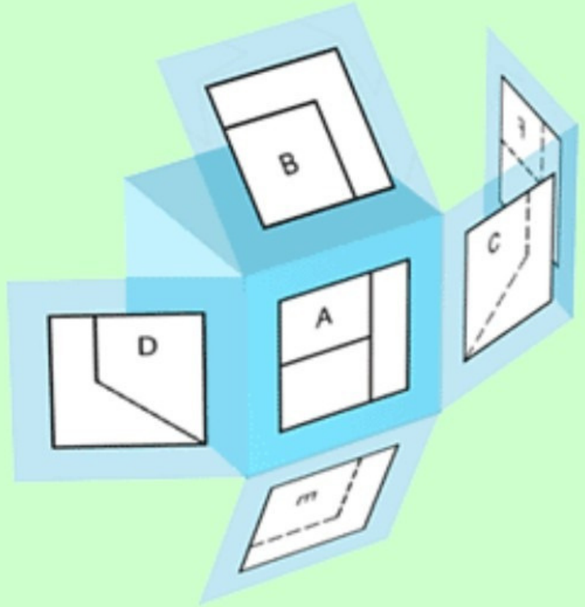
princípios gerais de representação em desenho técnico

condições específicas

posição relativas das vistas no 3º diedro | **sistema americano**





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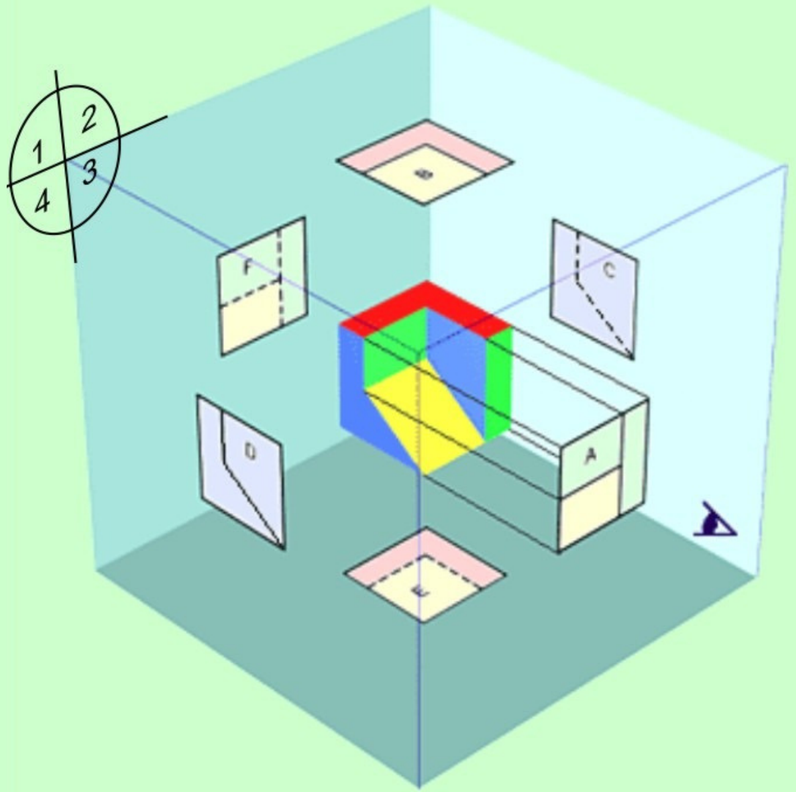
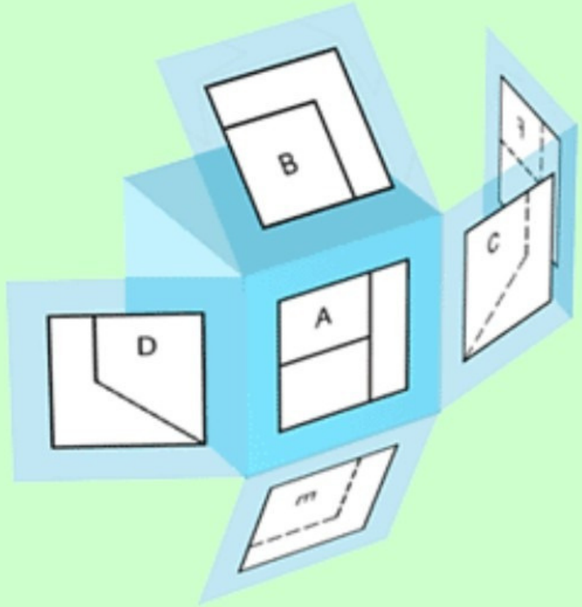
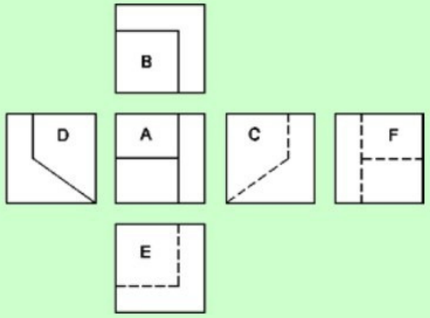
condições específicas

posição relativas das vistas no 3º diedro | **sistema americano**







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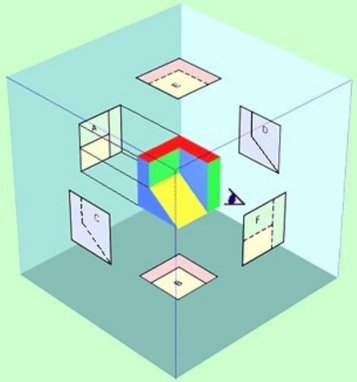
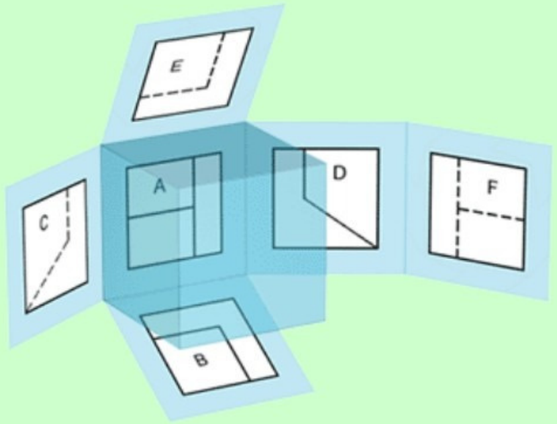
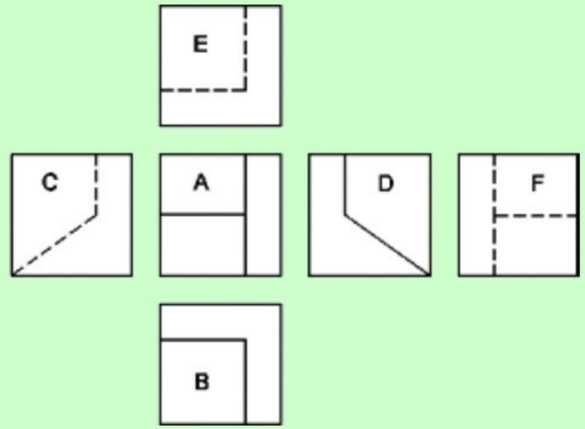
princípios gerais de representação em desenho técnico

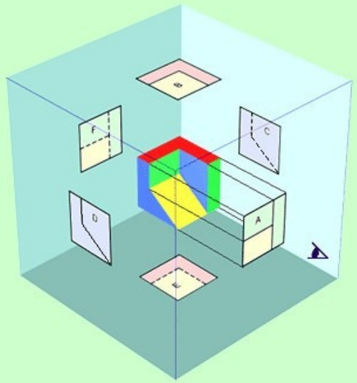
sistema europeu

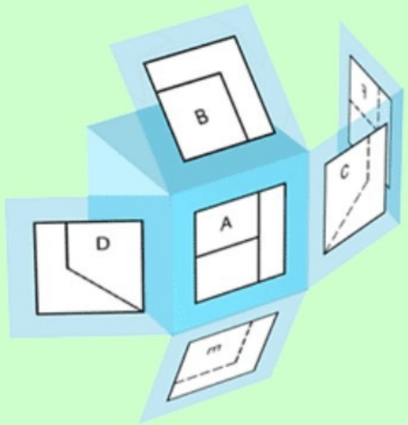


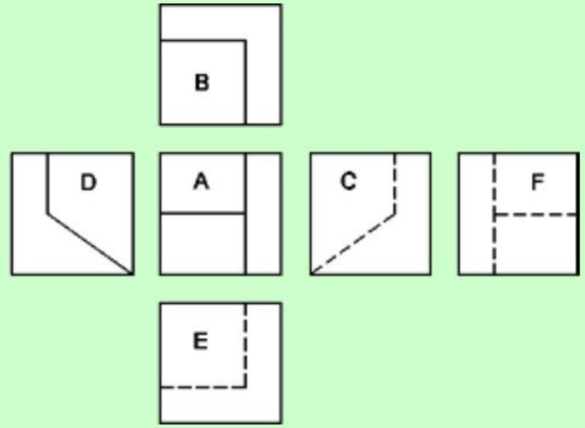




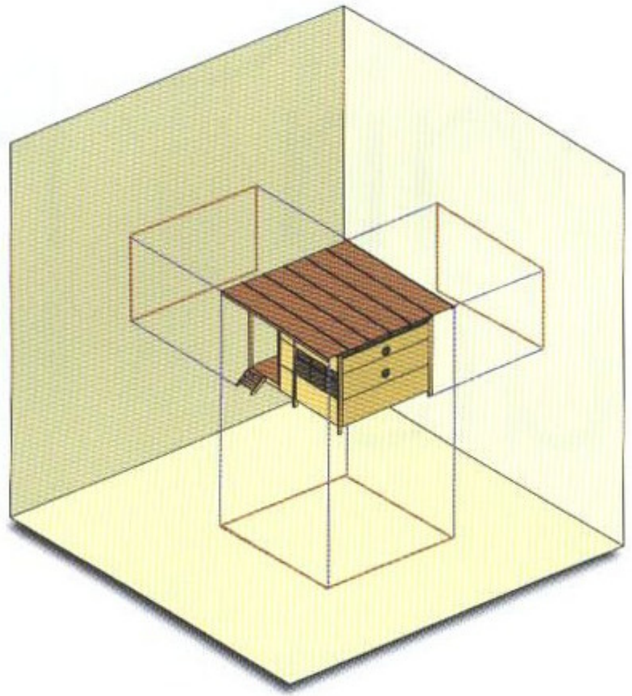
sistema americano







VISTAS ORTOGRÁFICAS – 1º. DIEDRO



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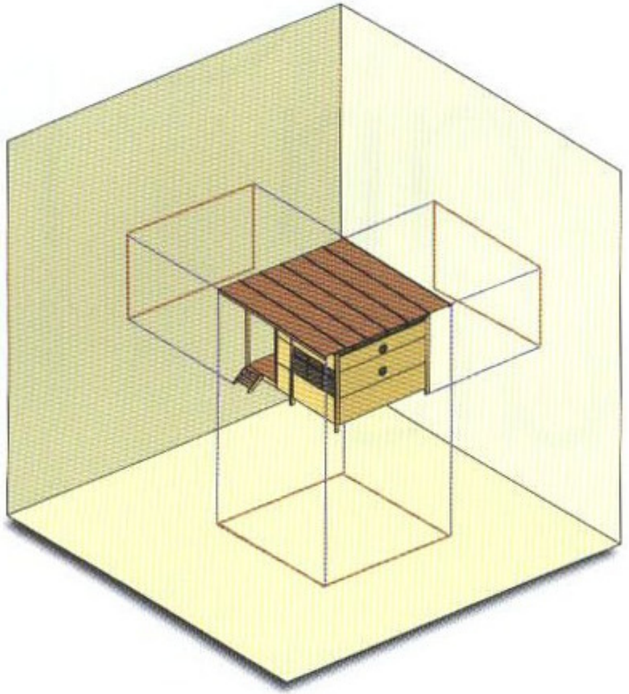
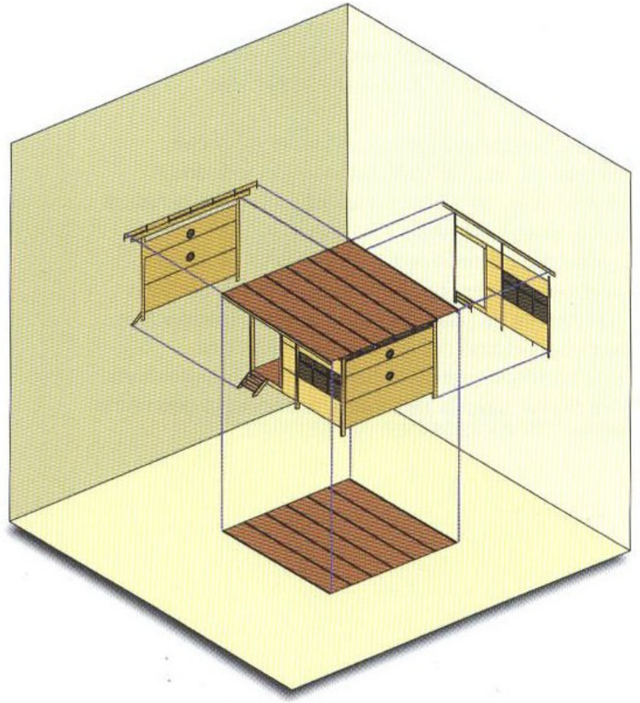
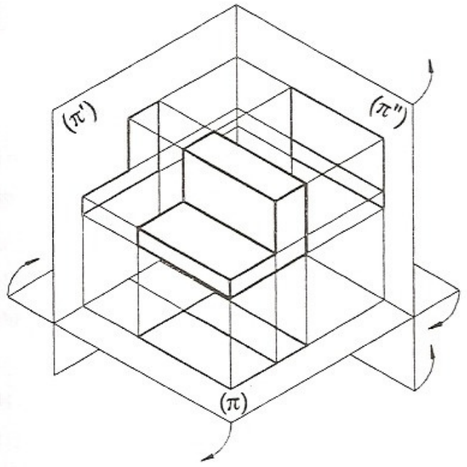
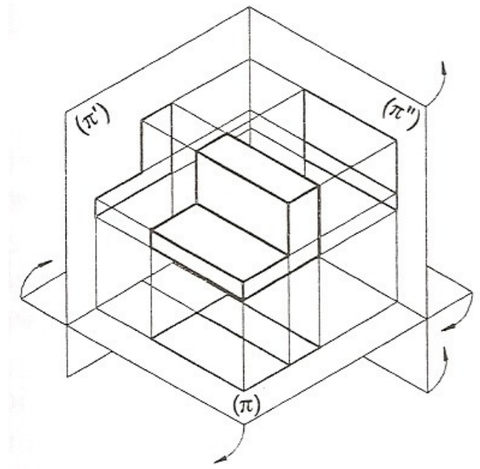






PROJEÇÃO DO SÓLIDO NO 1º DIEDRO



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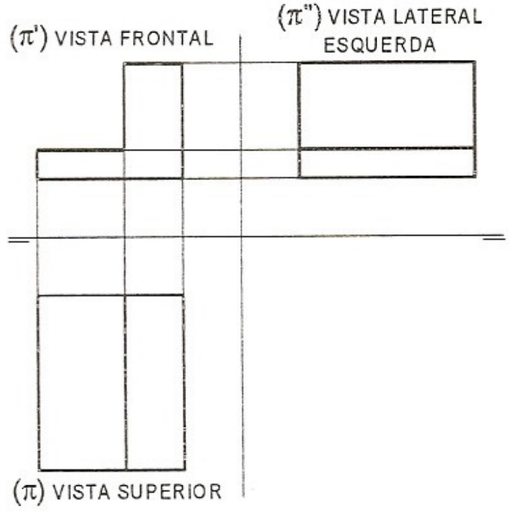

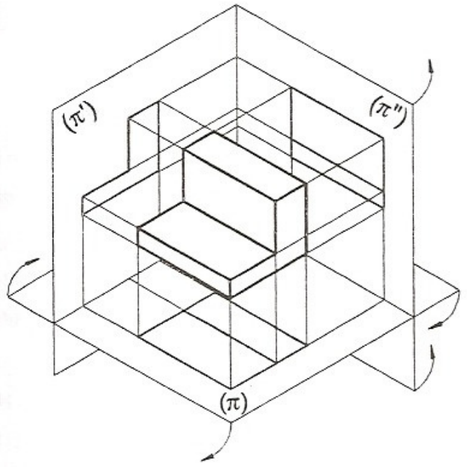

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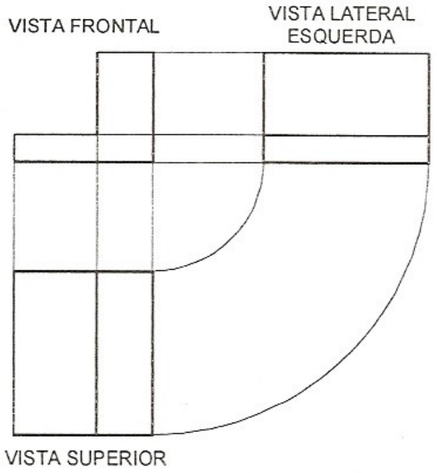

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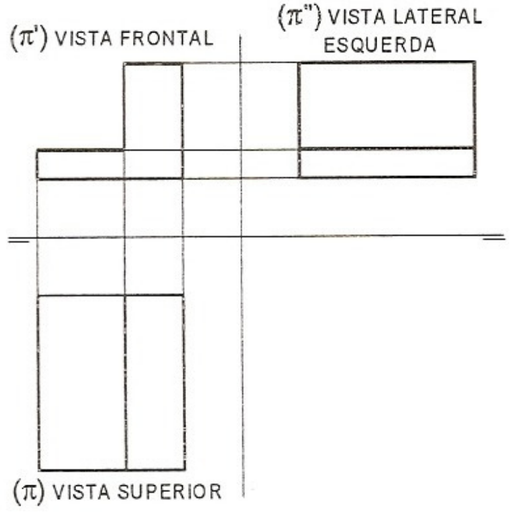

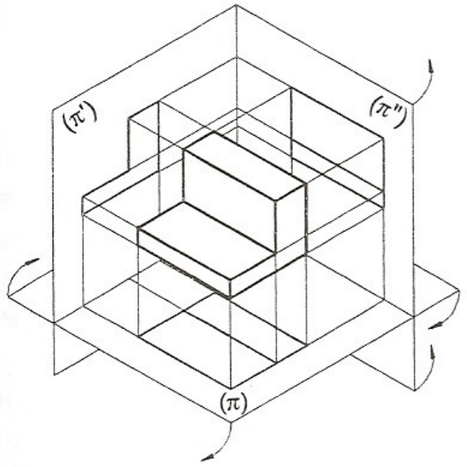

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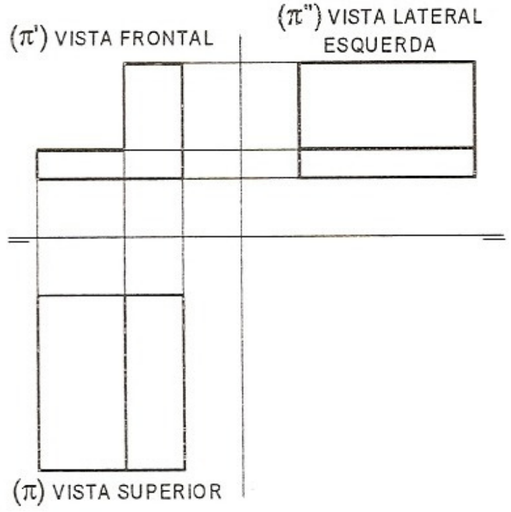

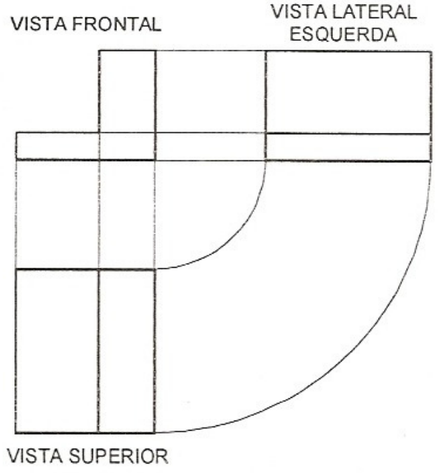

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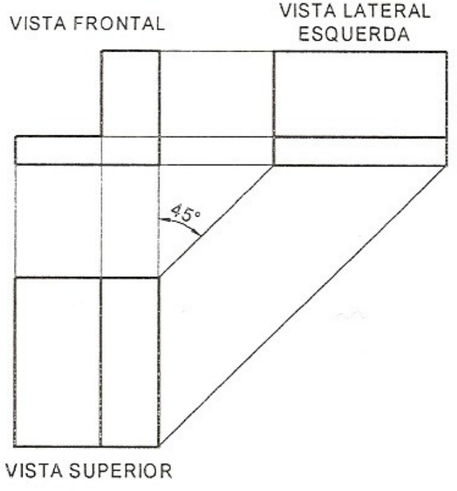

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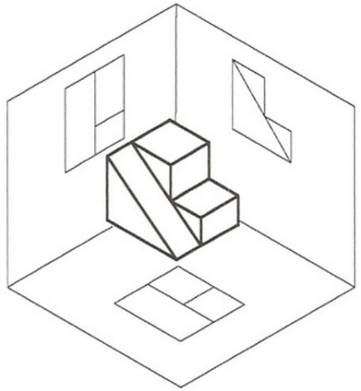

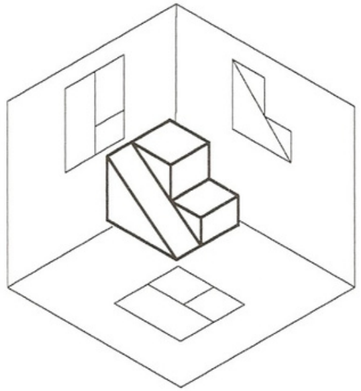

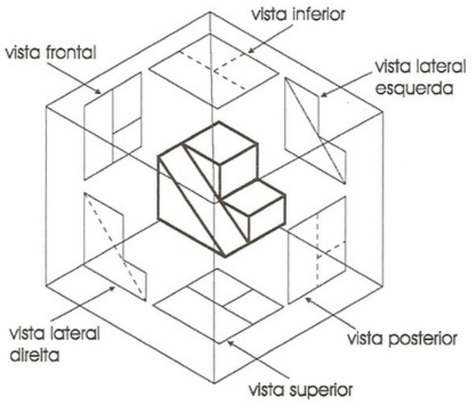
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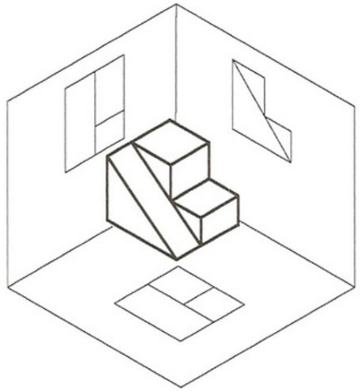
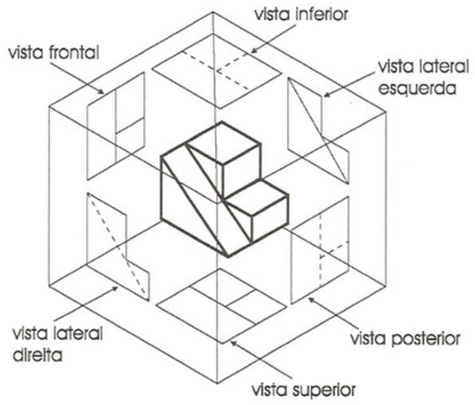
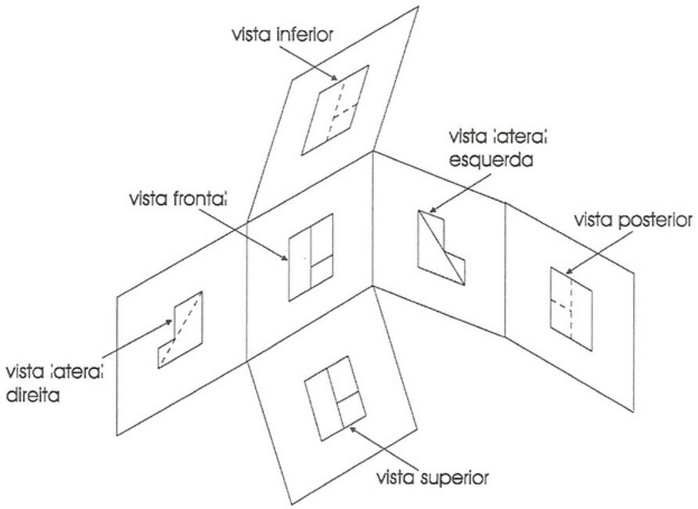
vista frontal
vista lateral
esquerda
vista lateral
direita
vista posterior
vista superior




vista inferior
vista frontal
vista lateral
esquerda
vista lateral
direita
vista posterior
vista superior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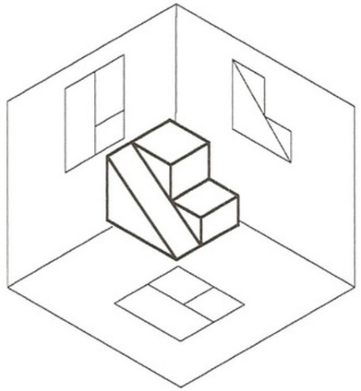

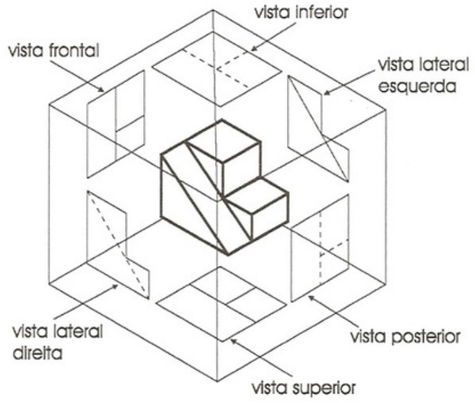
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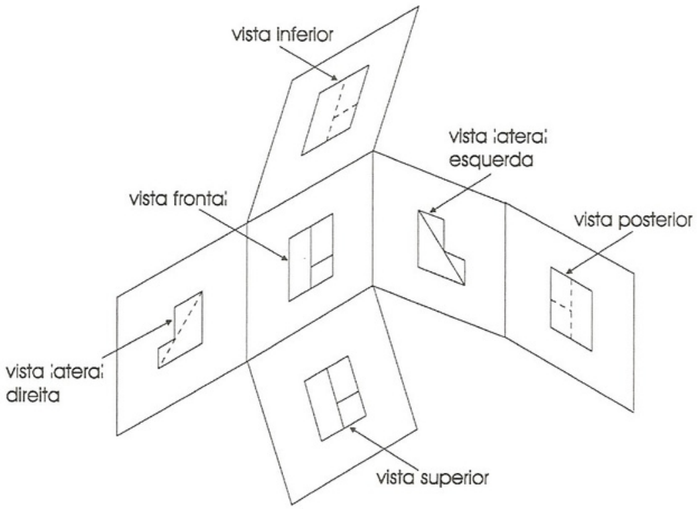
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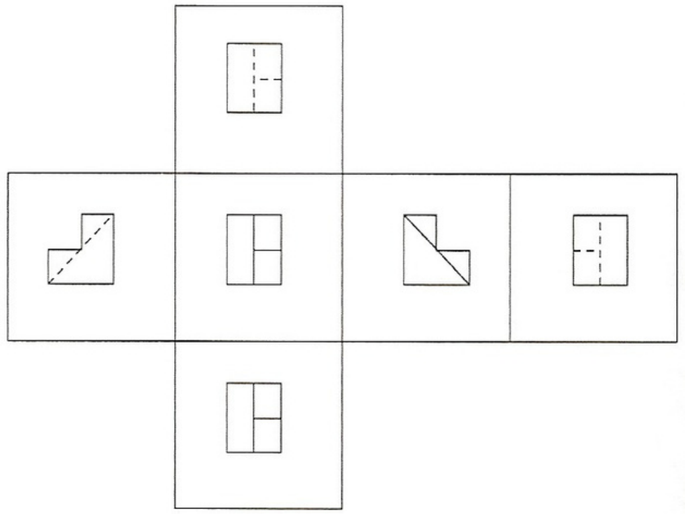

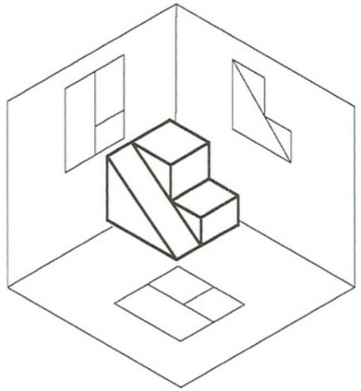

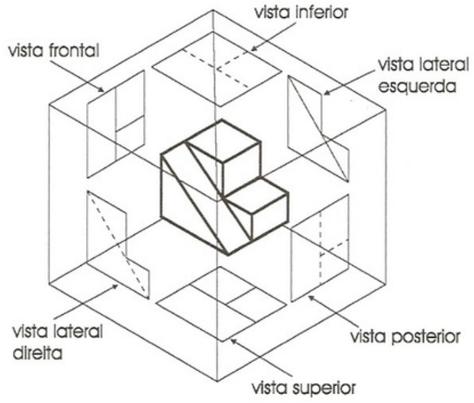
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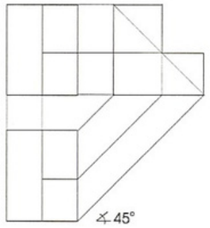
vista lateral
esquerda
vista lateral
direita
vista posterior
vista superior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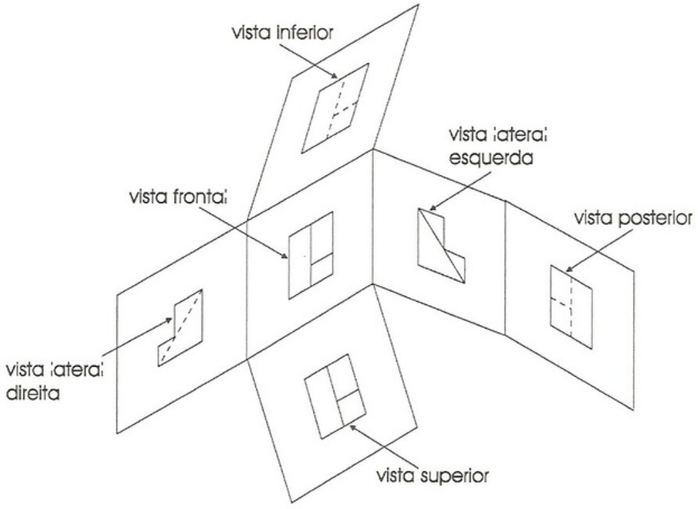
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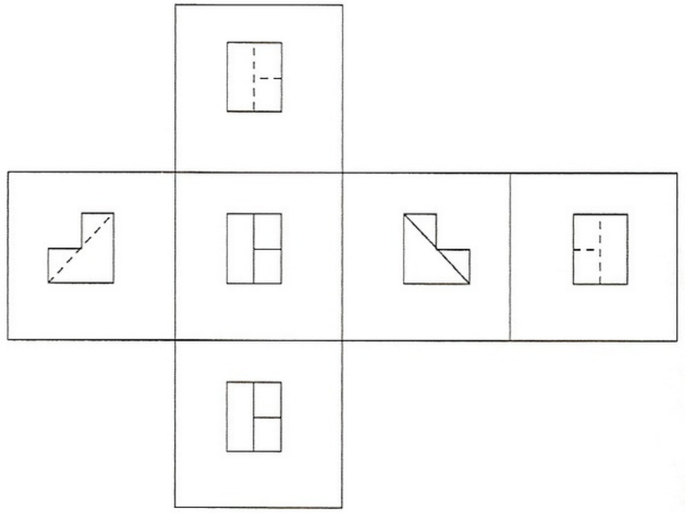
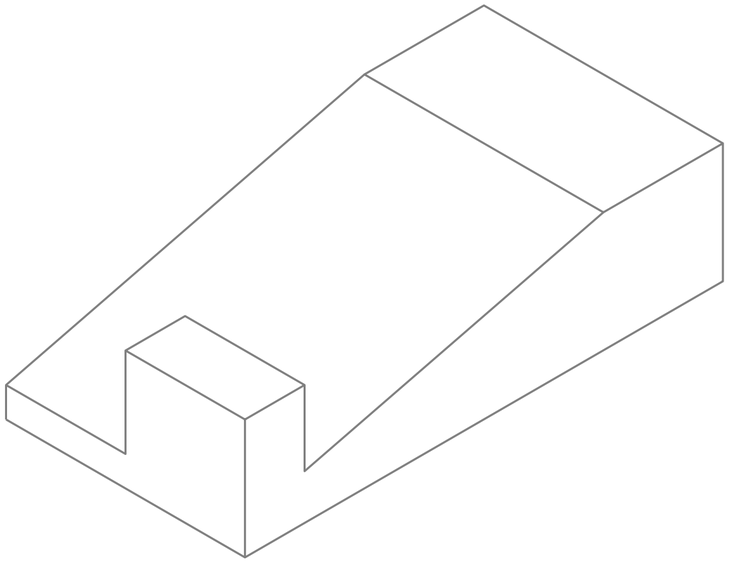
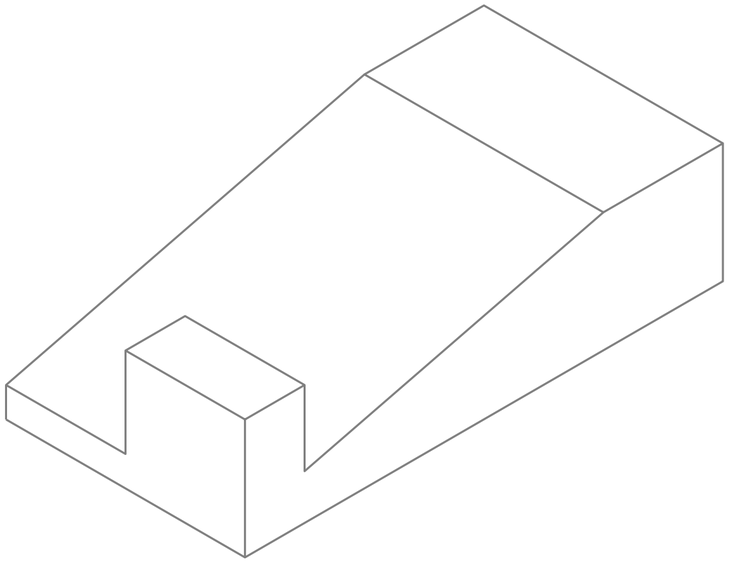
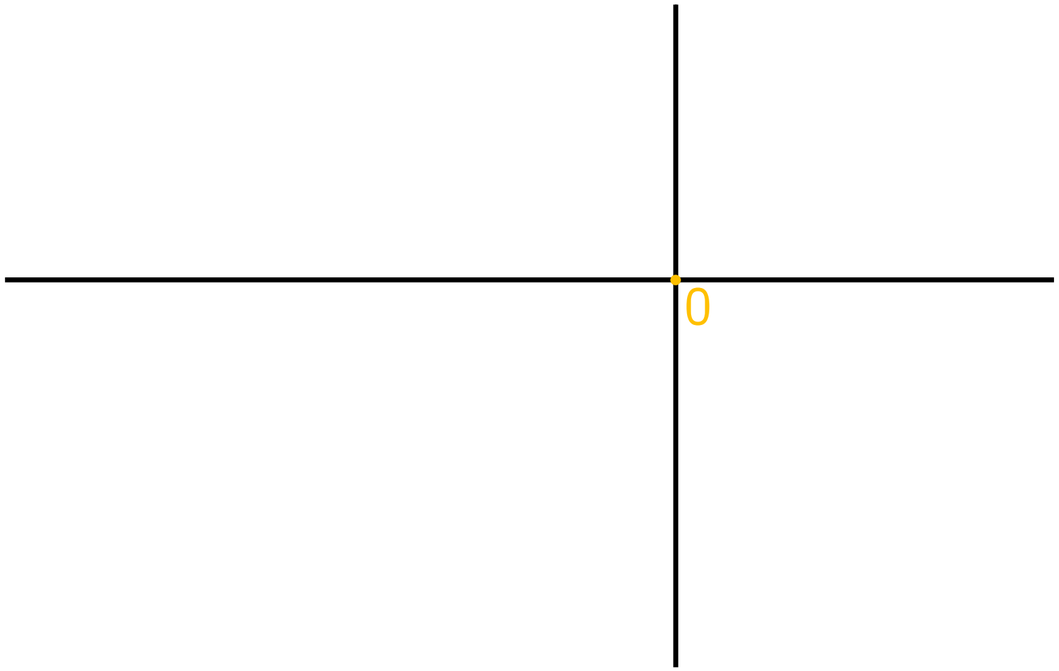


PASSO A PASSO EXERCÍCIO E1



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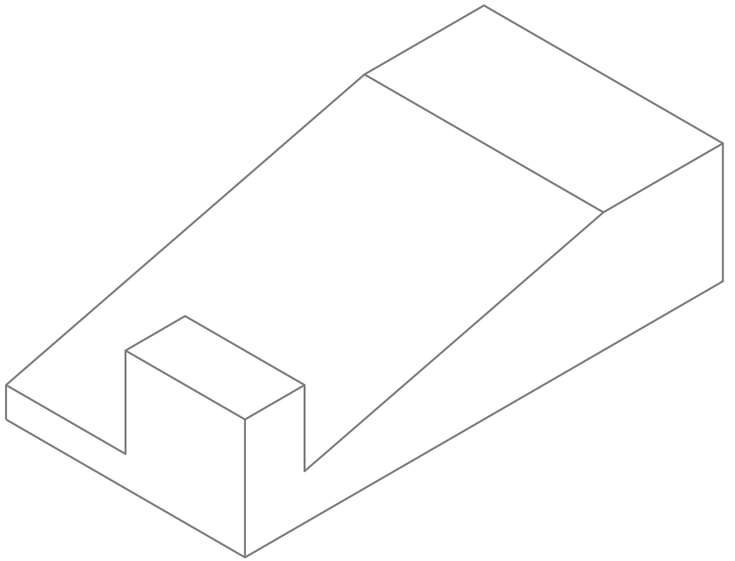

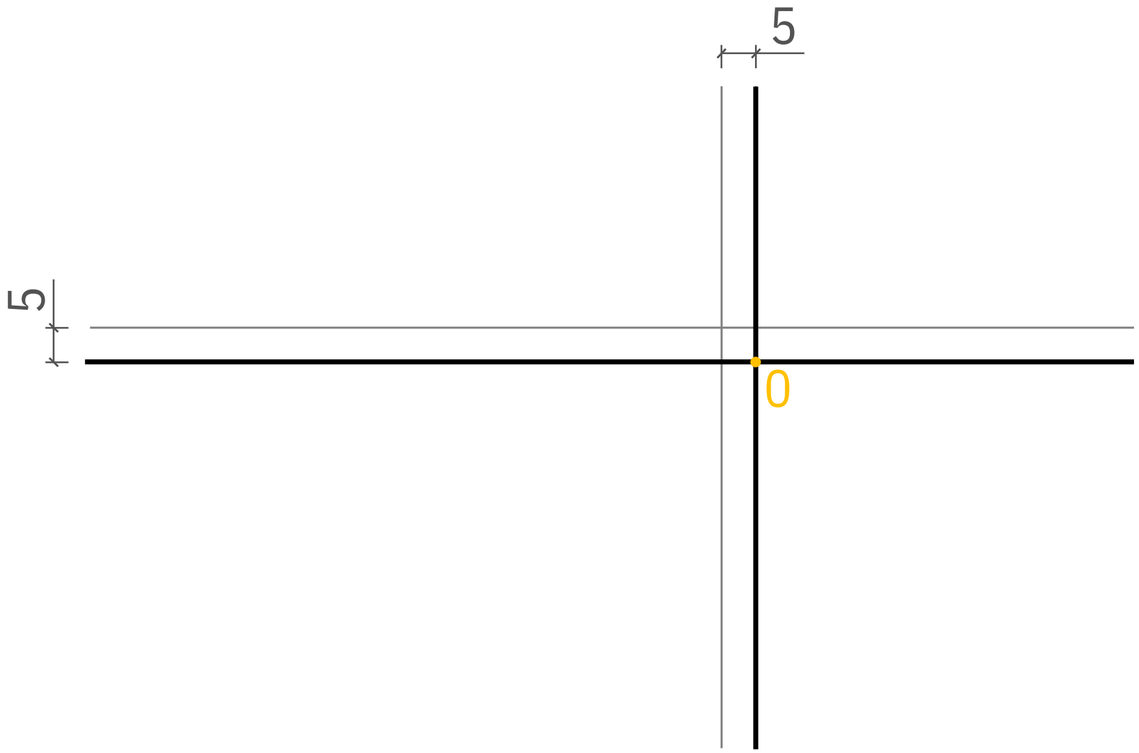
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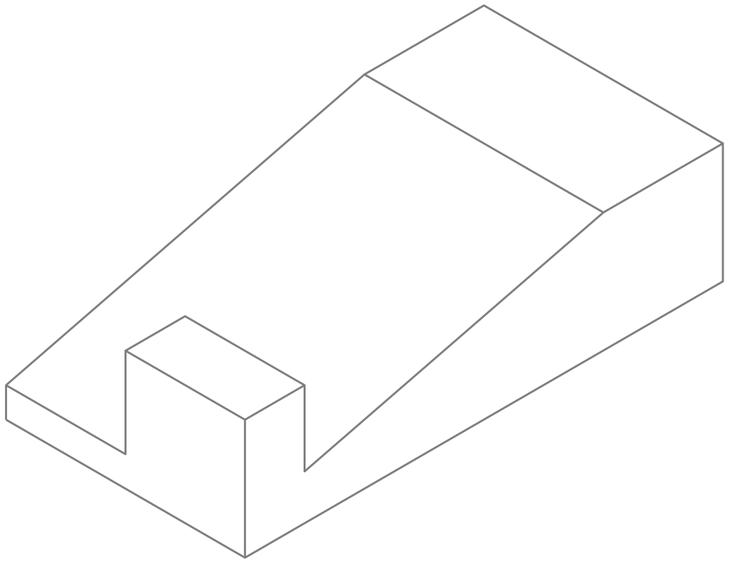

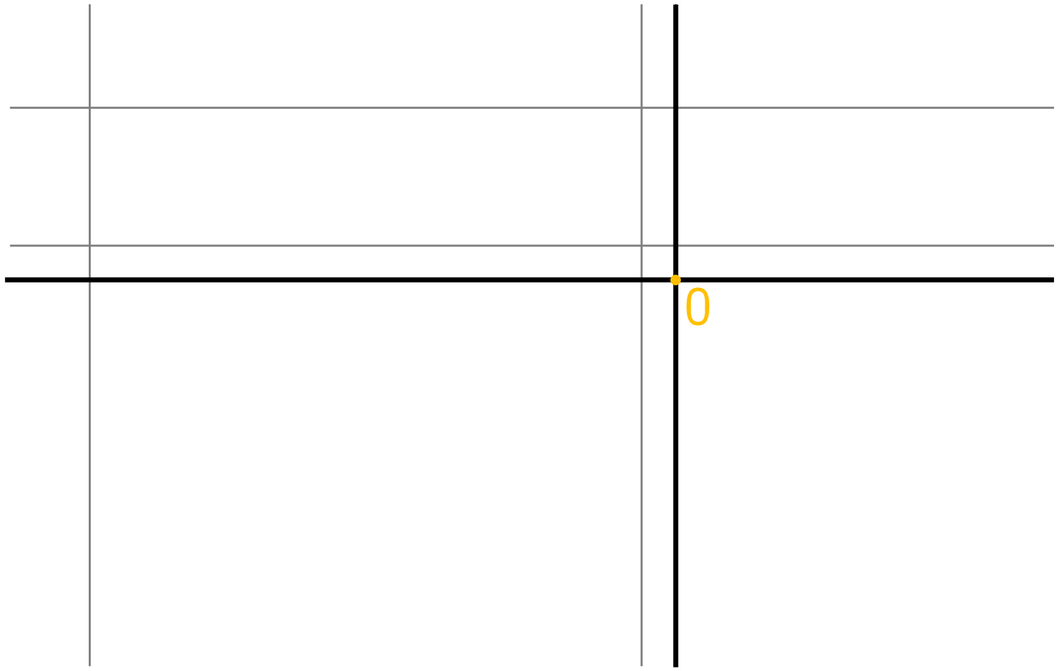
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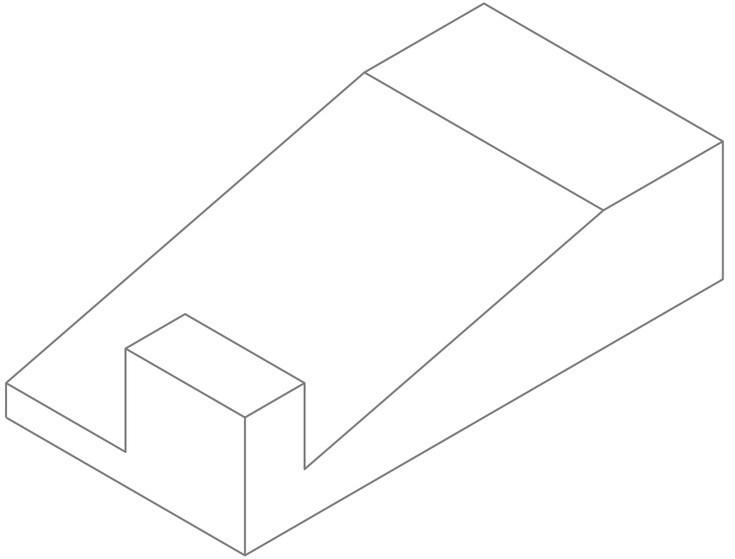

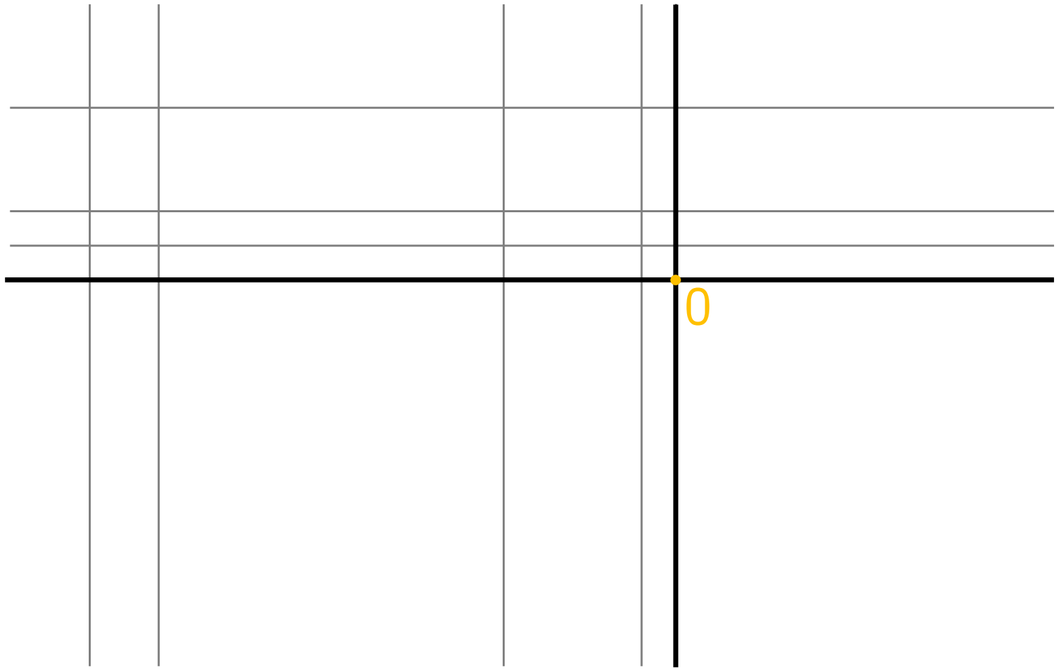
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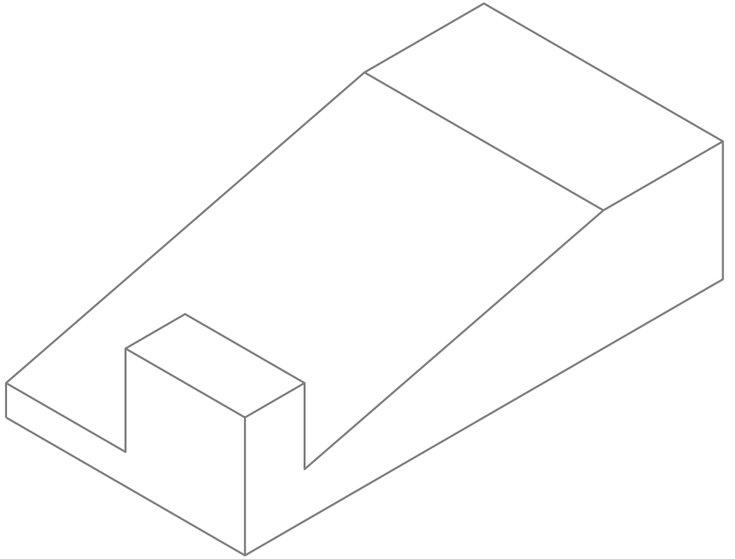

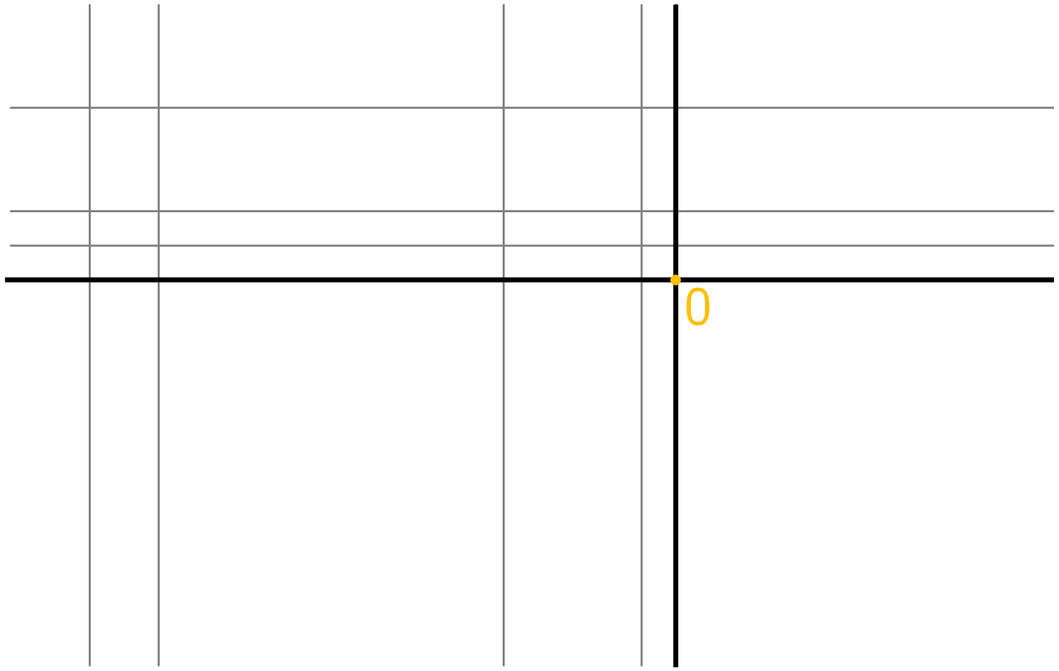
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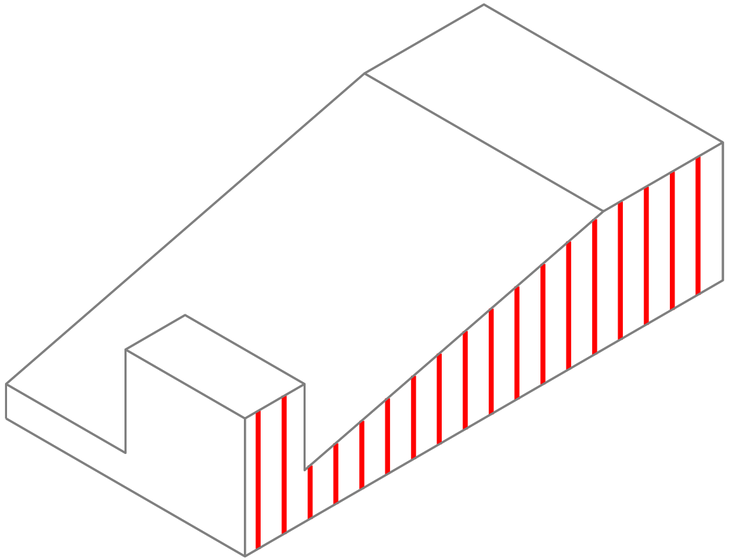

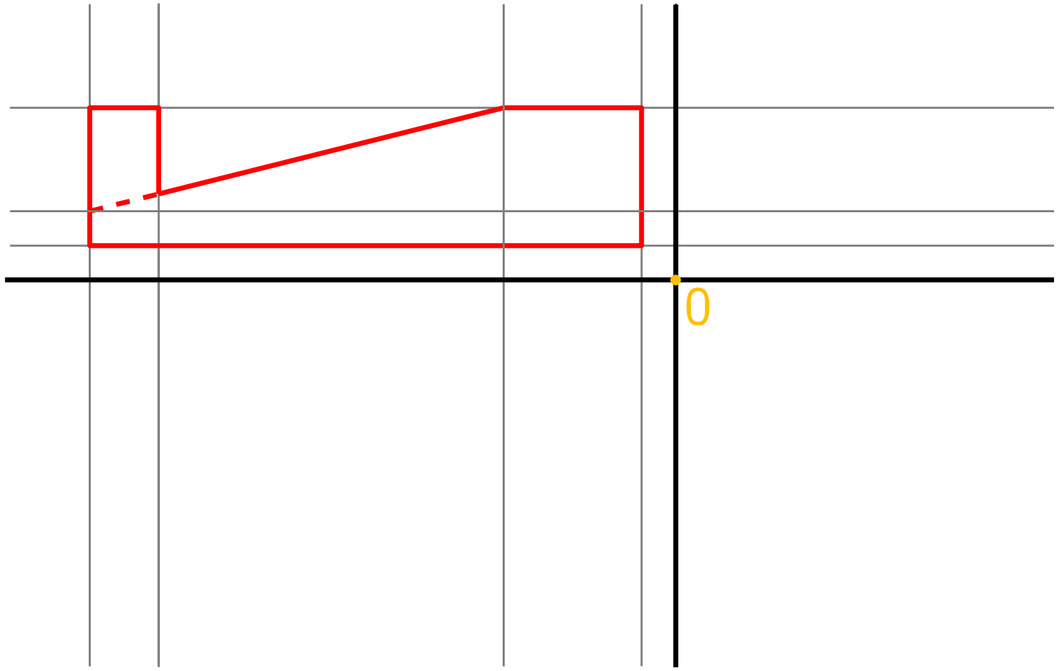
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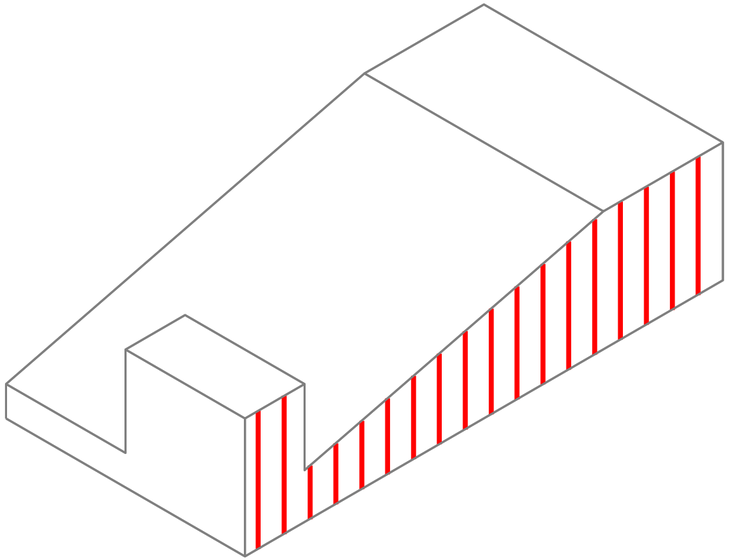

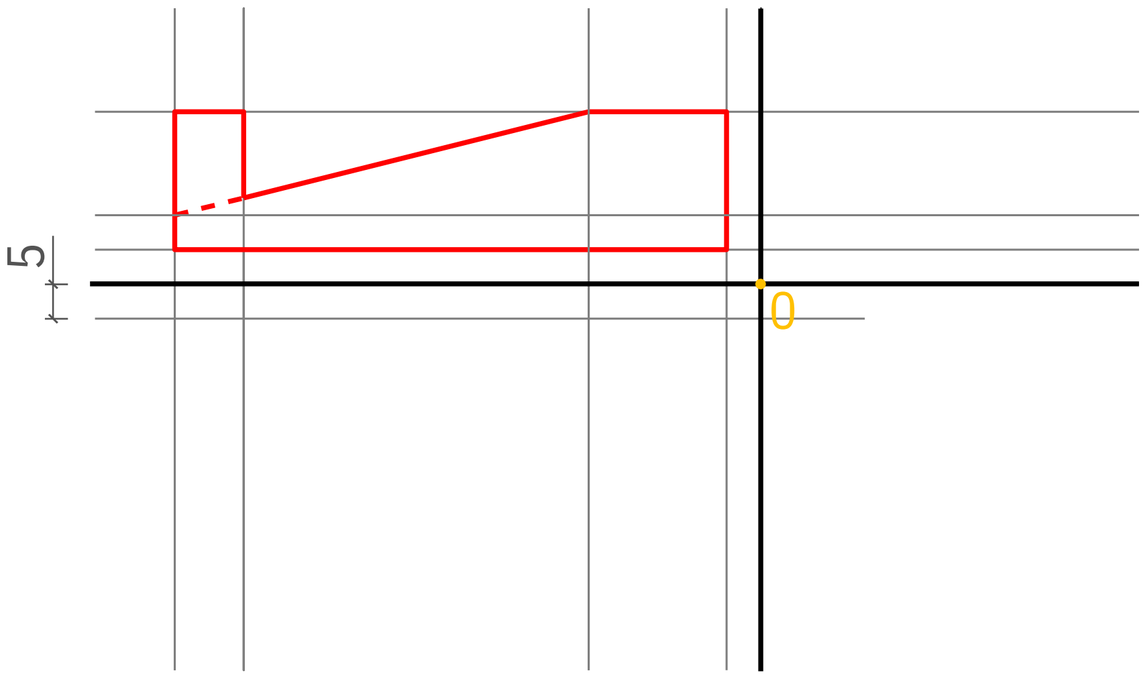
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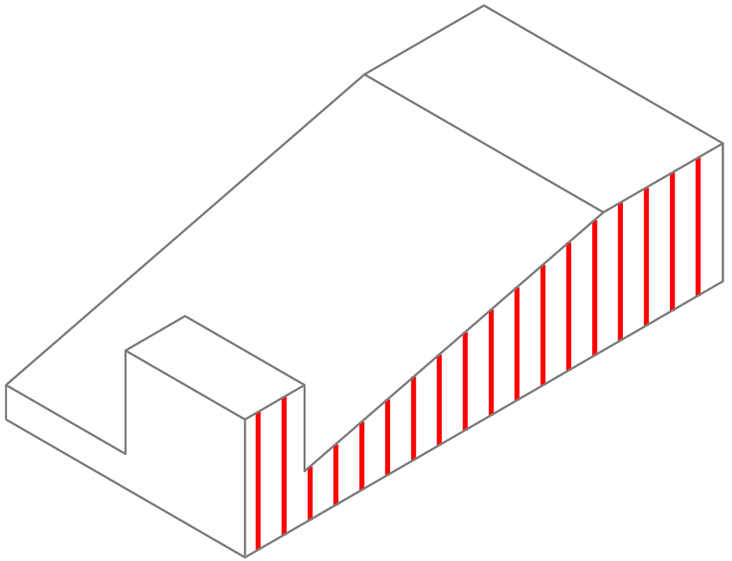

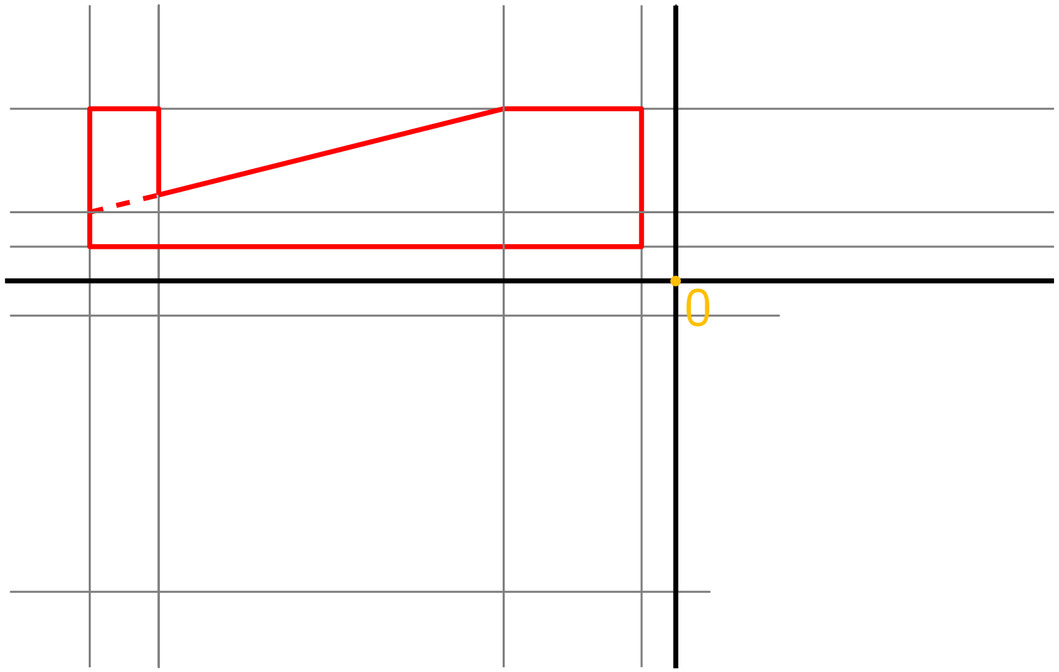
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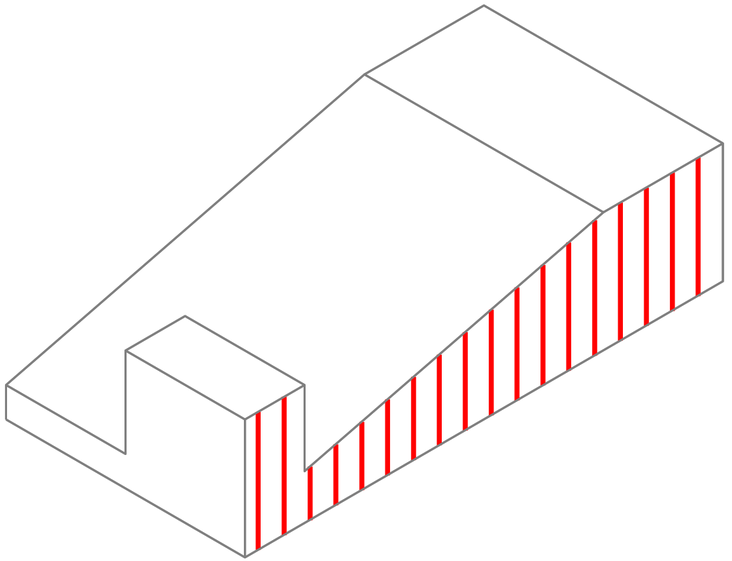

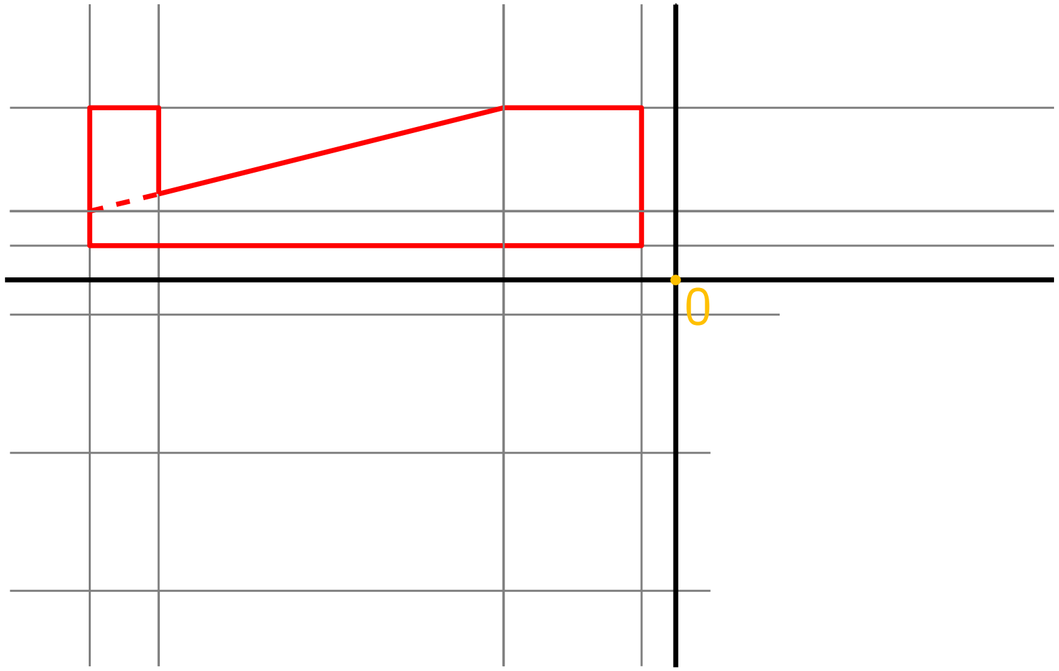
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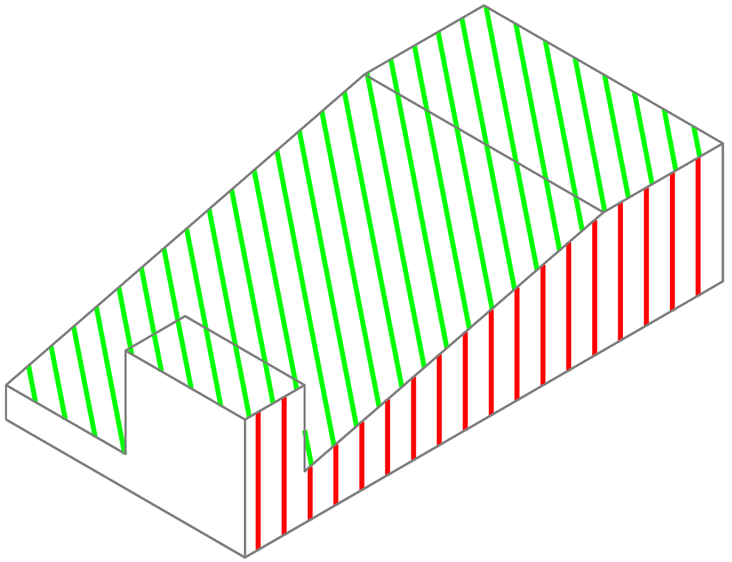

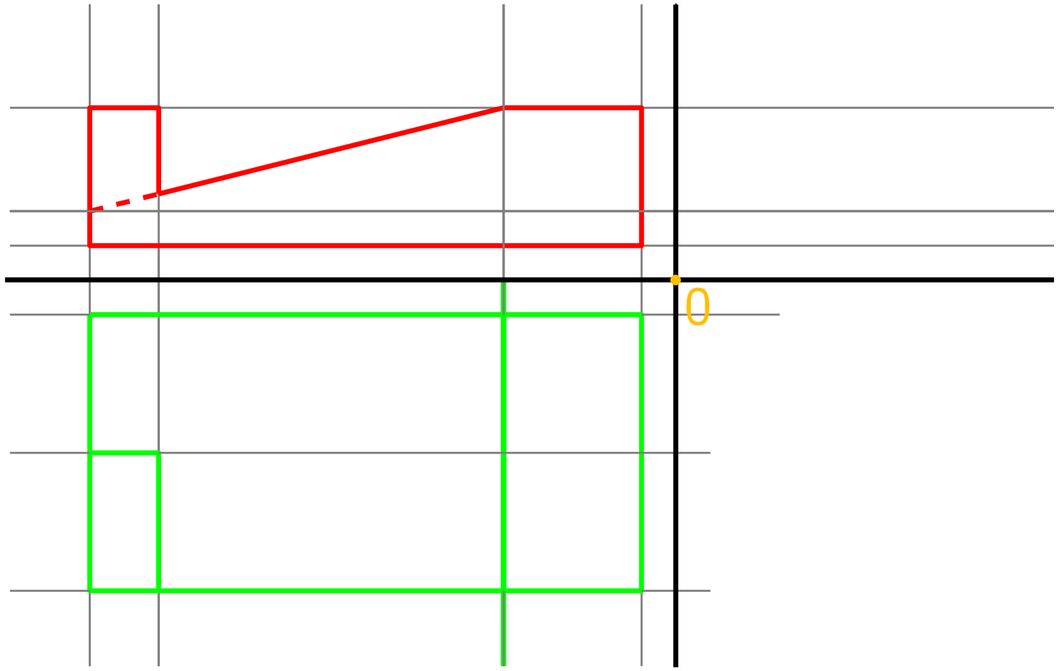
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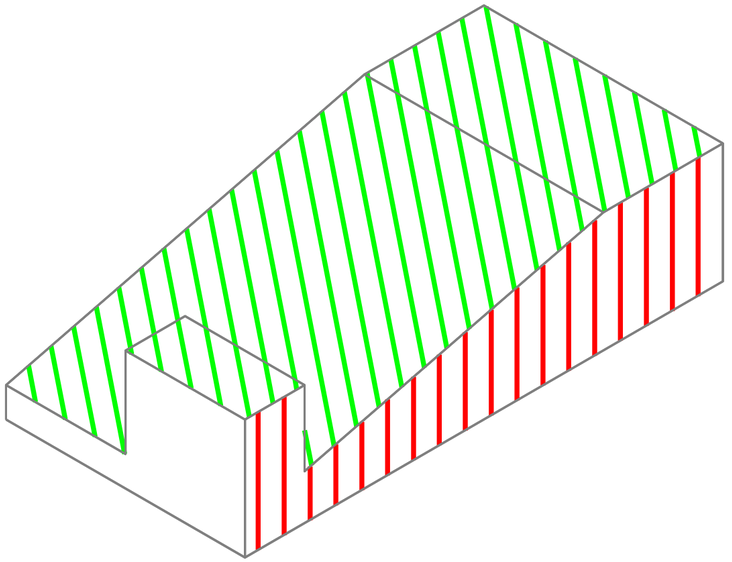

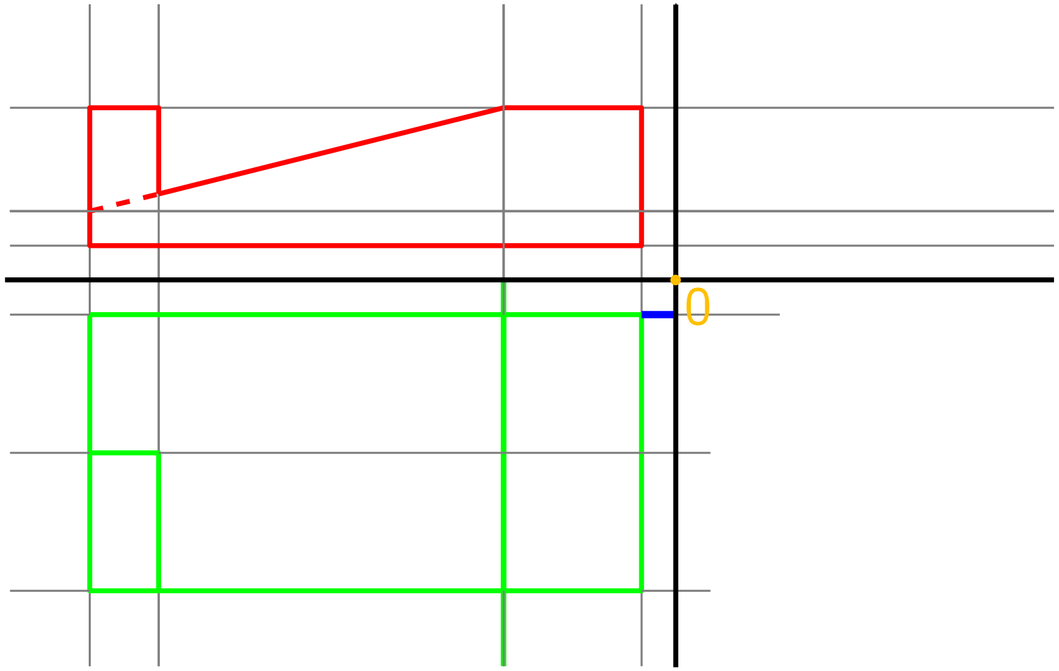
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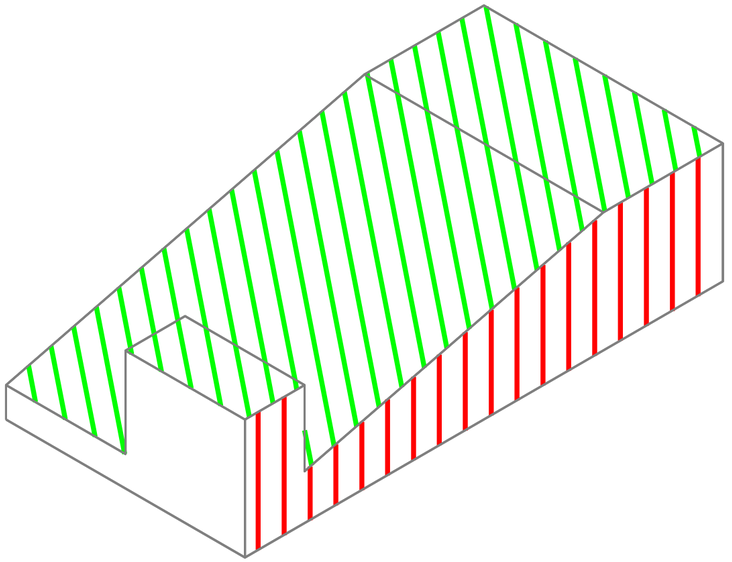

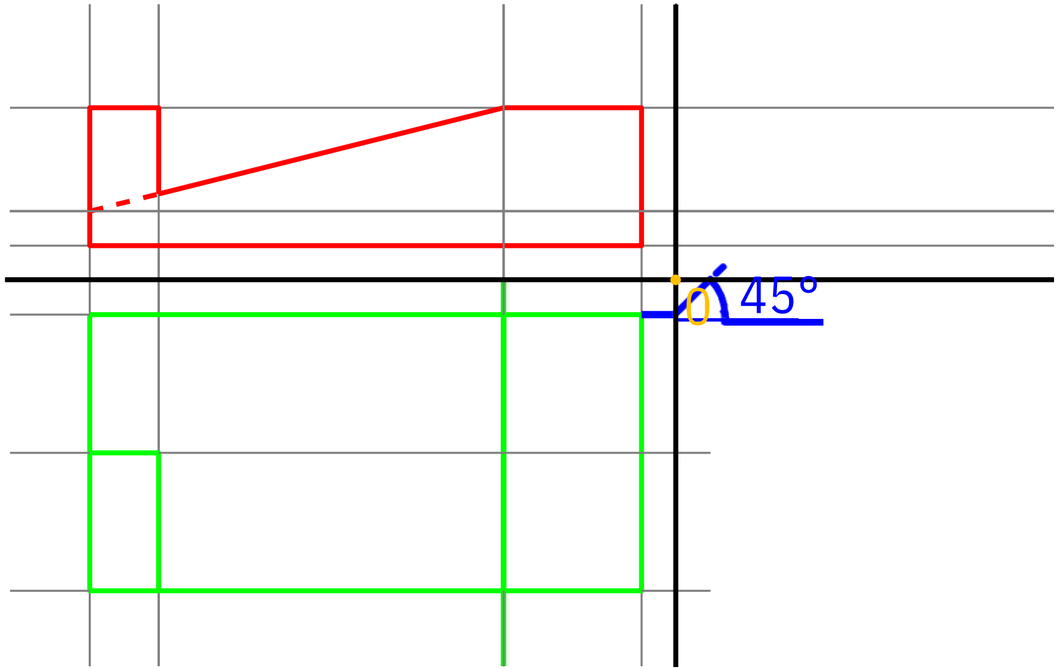
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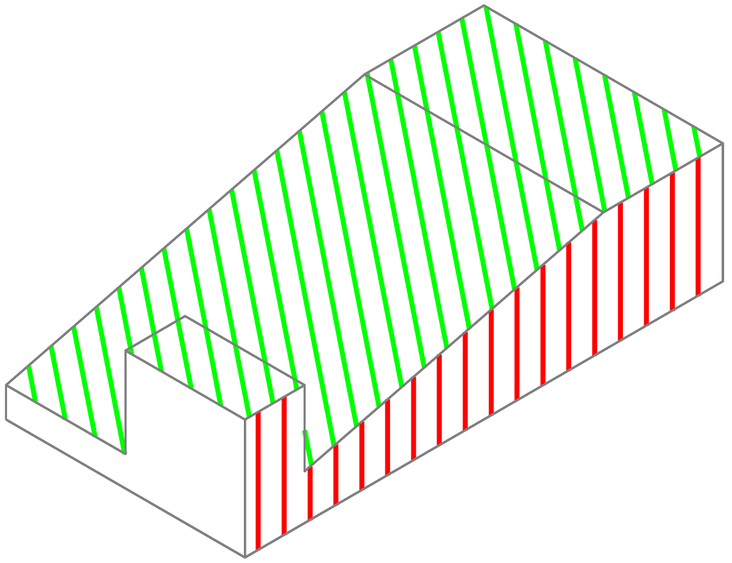

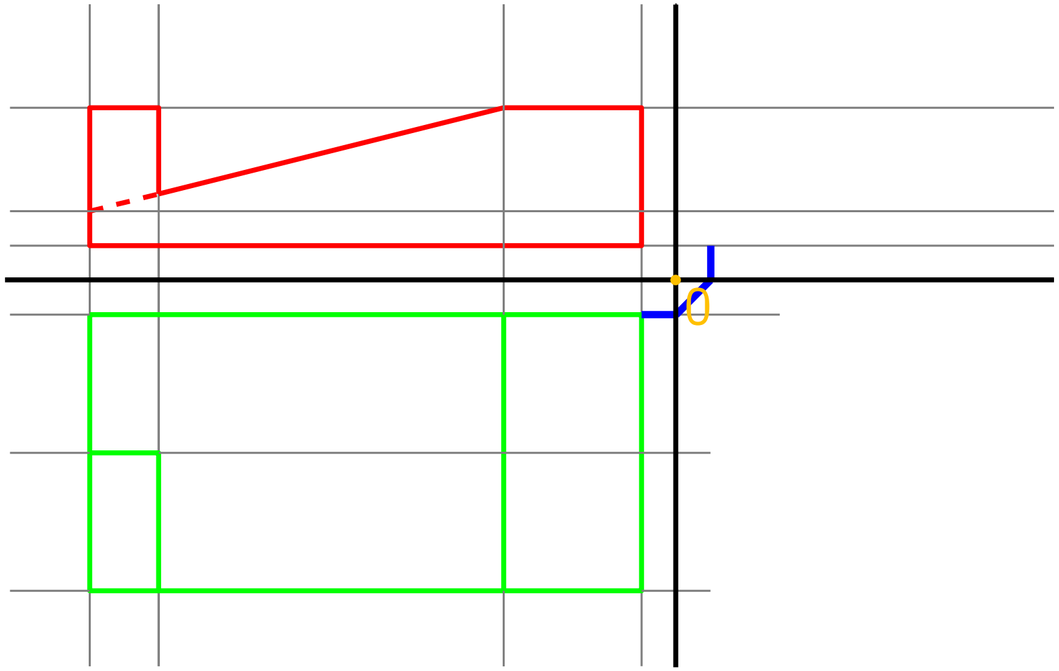
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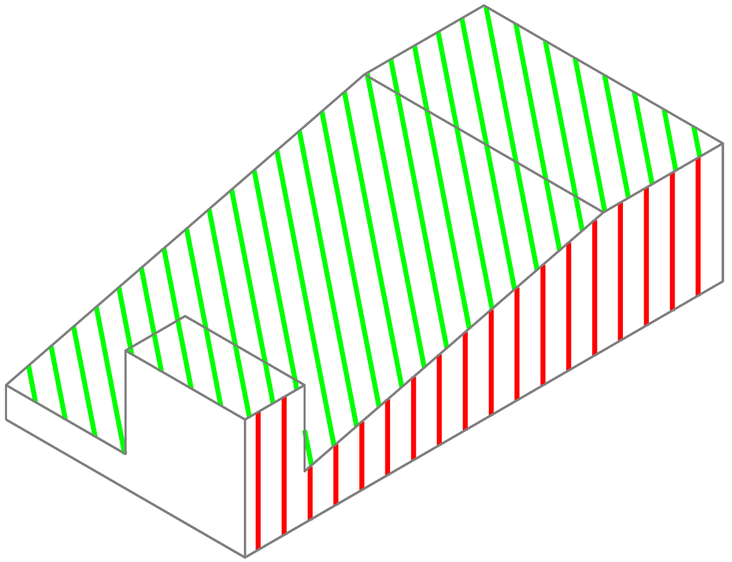

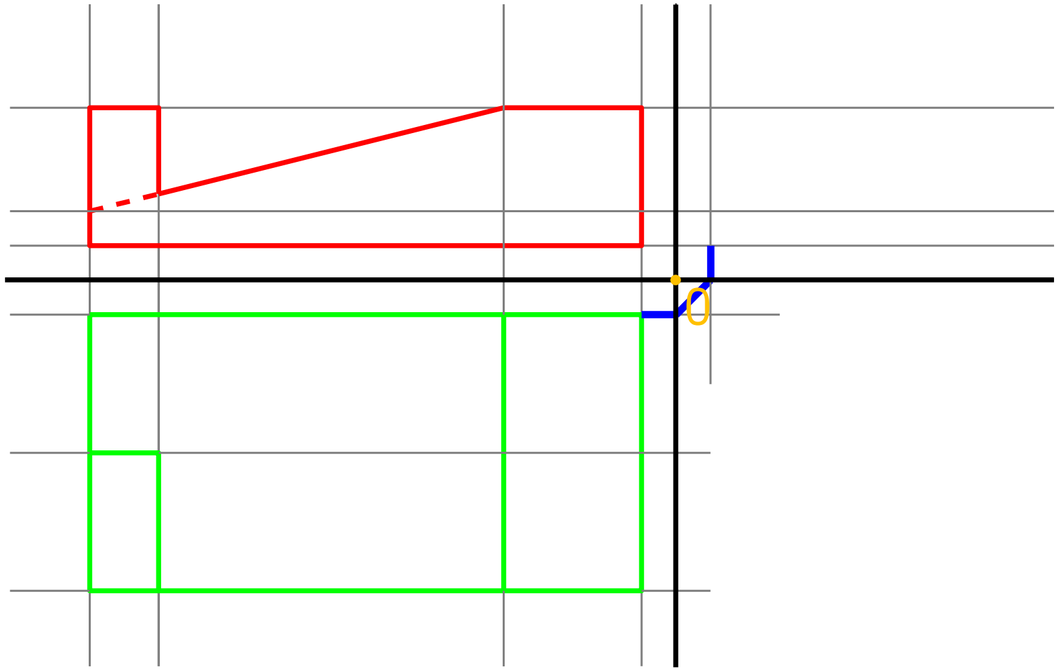

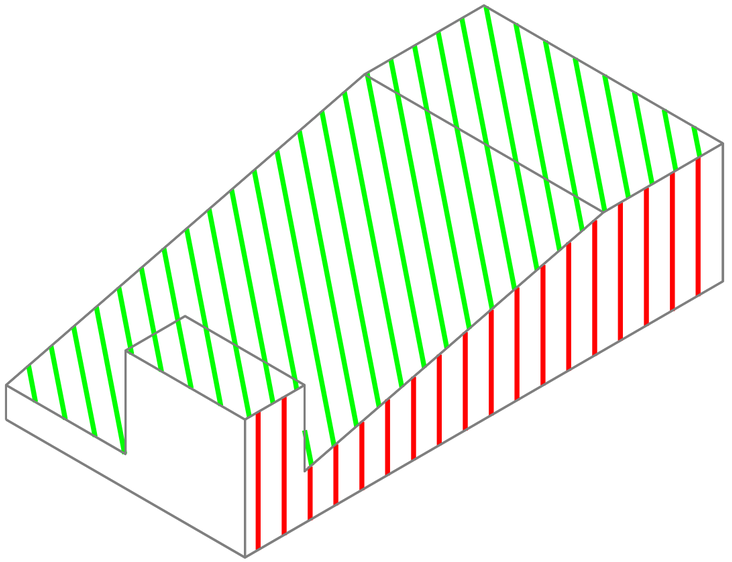

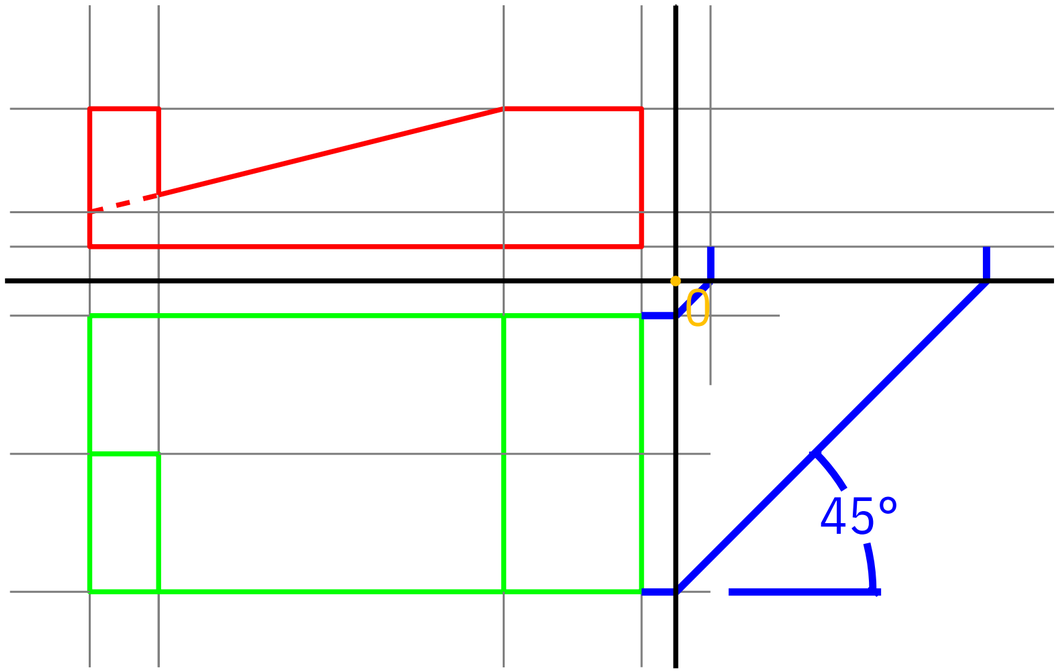
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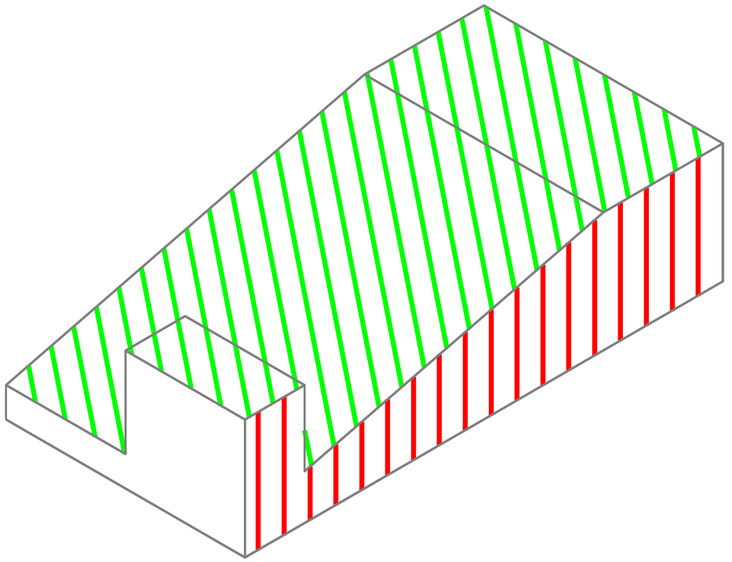

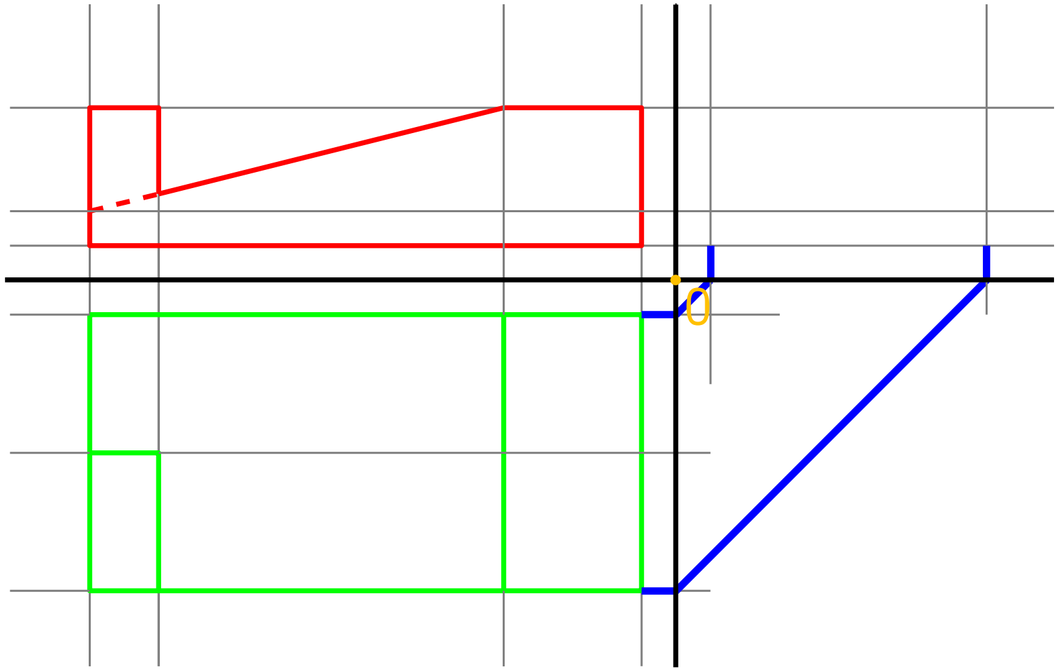
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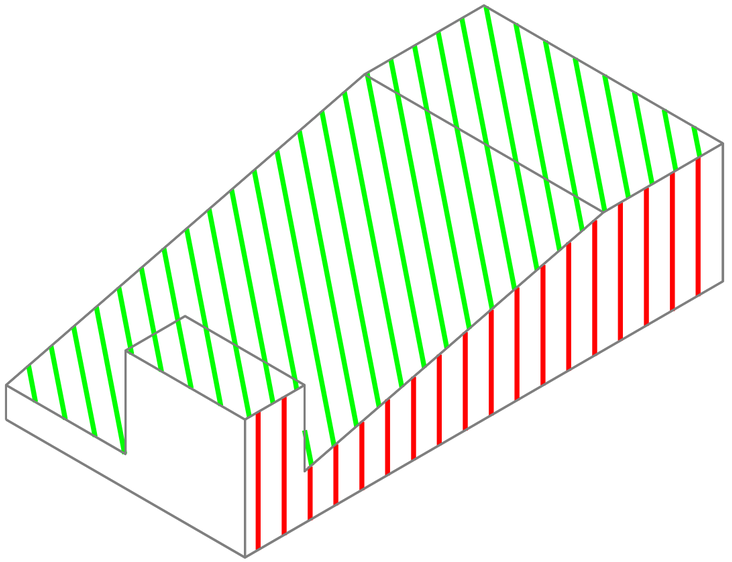

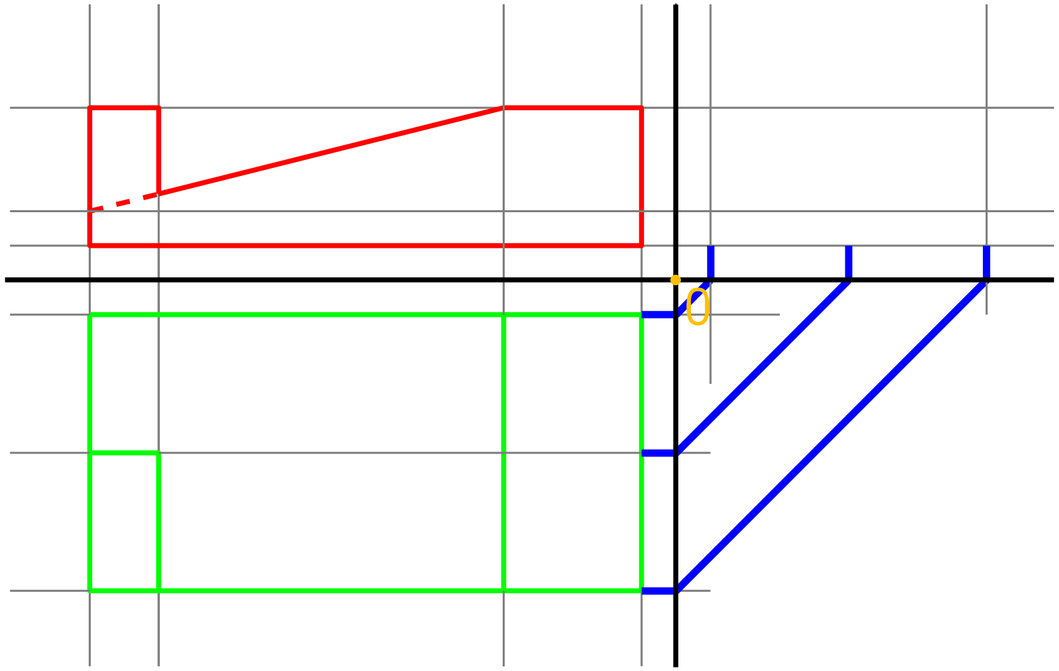
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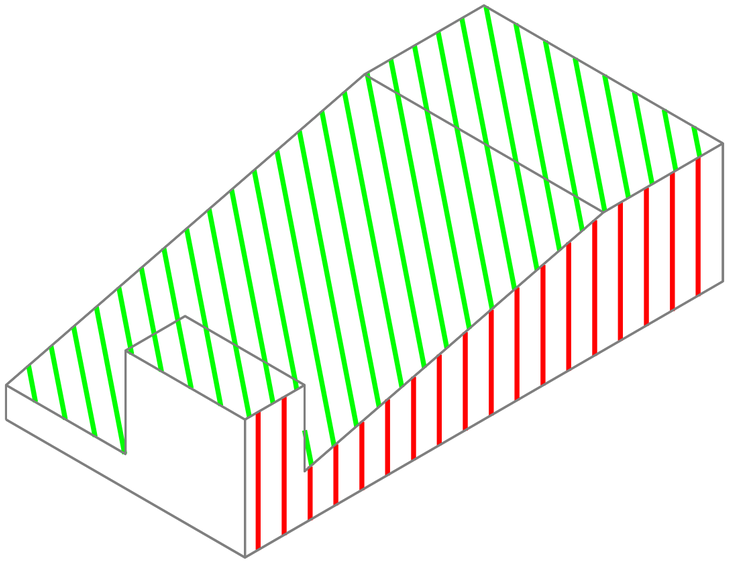

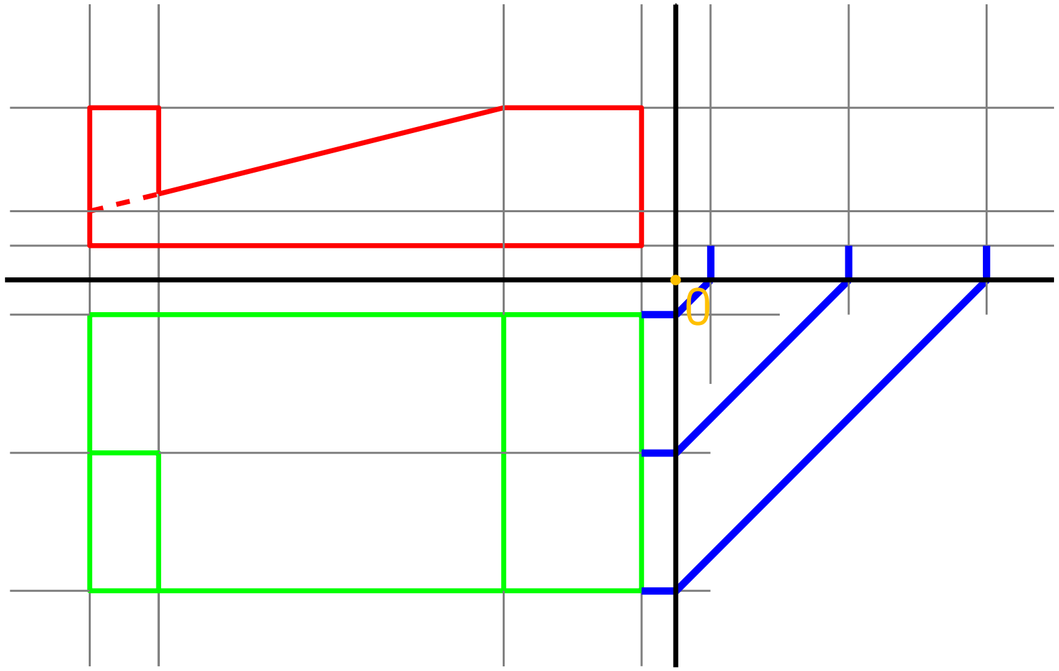
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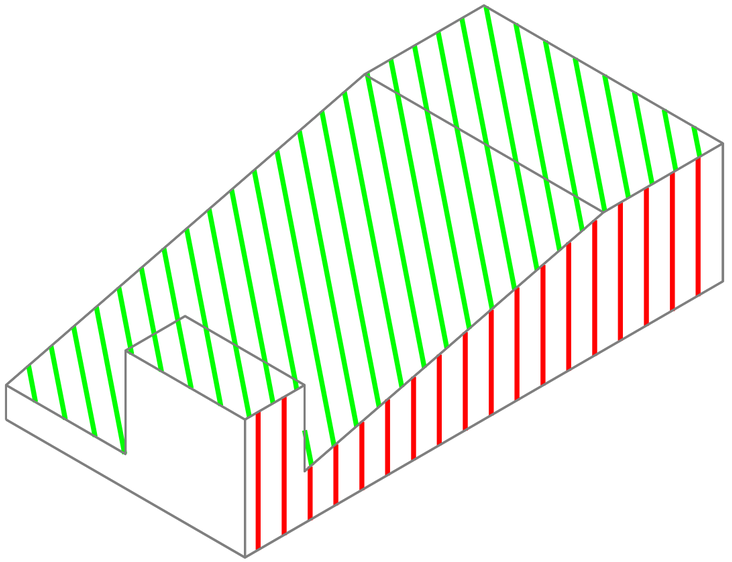

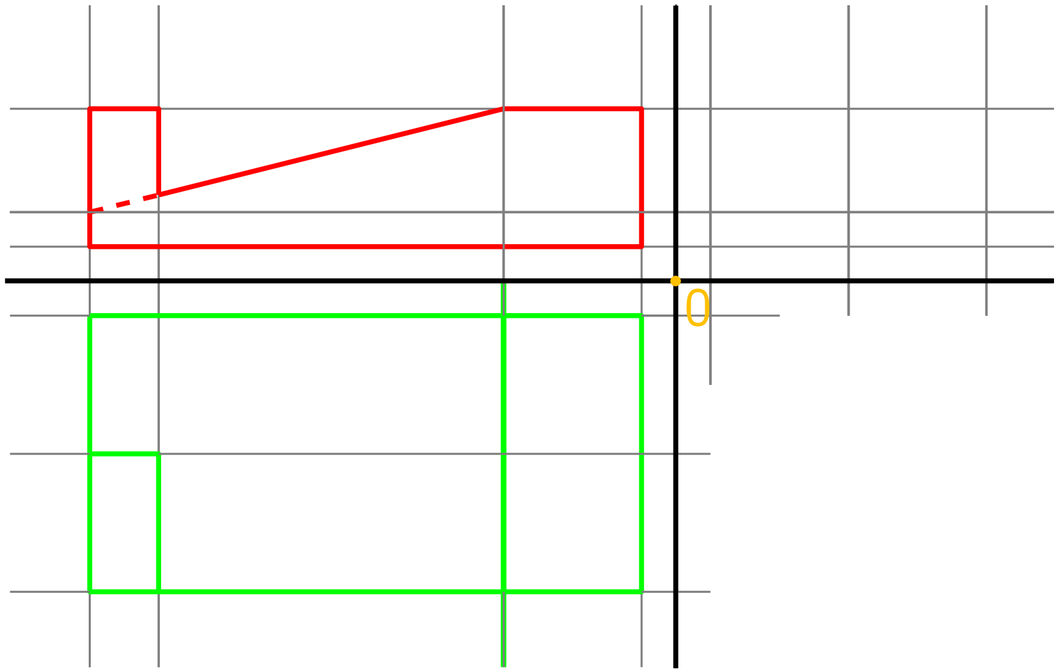
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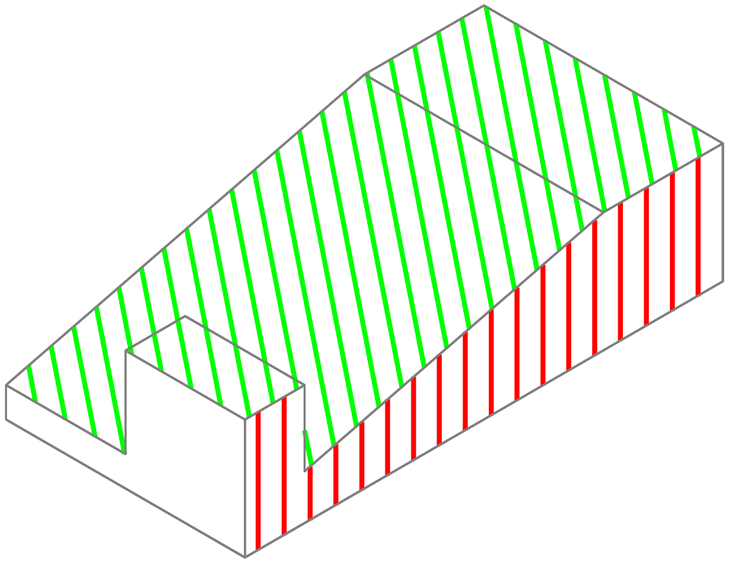

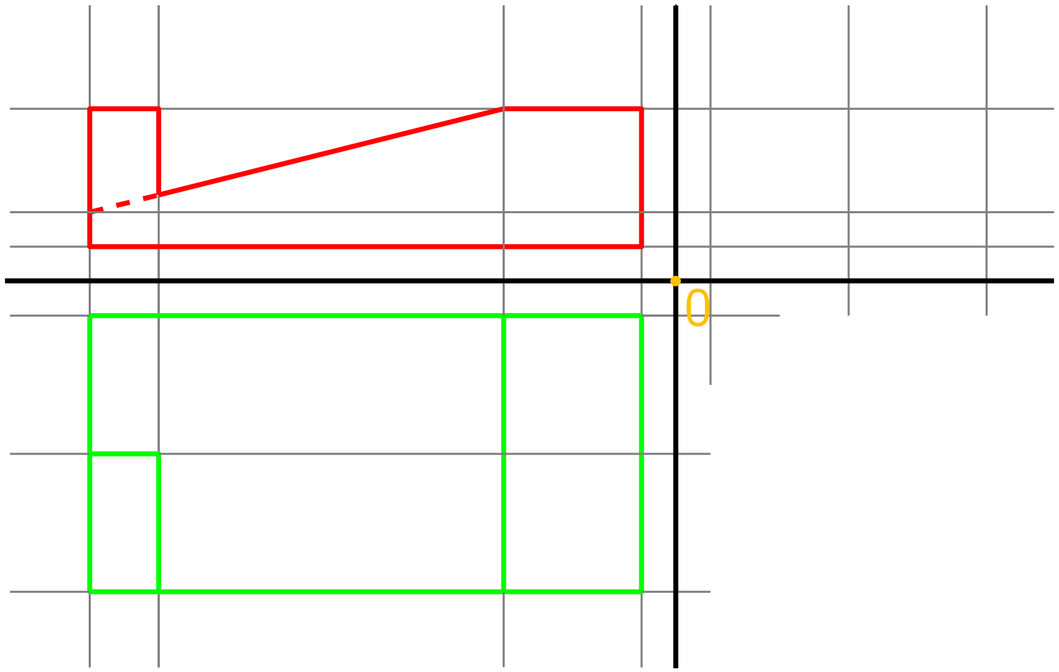
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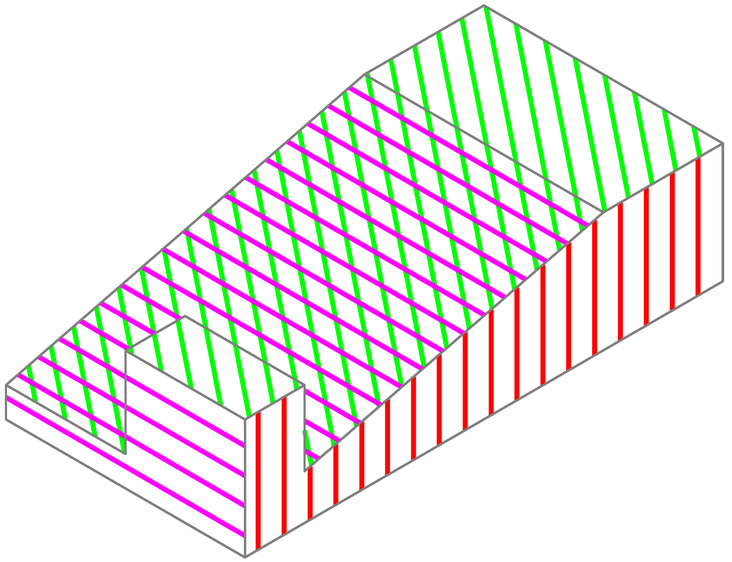

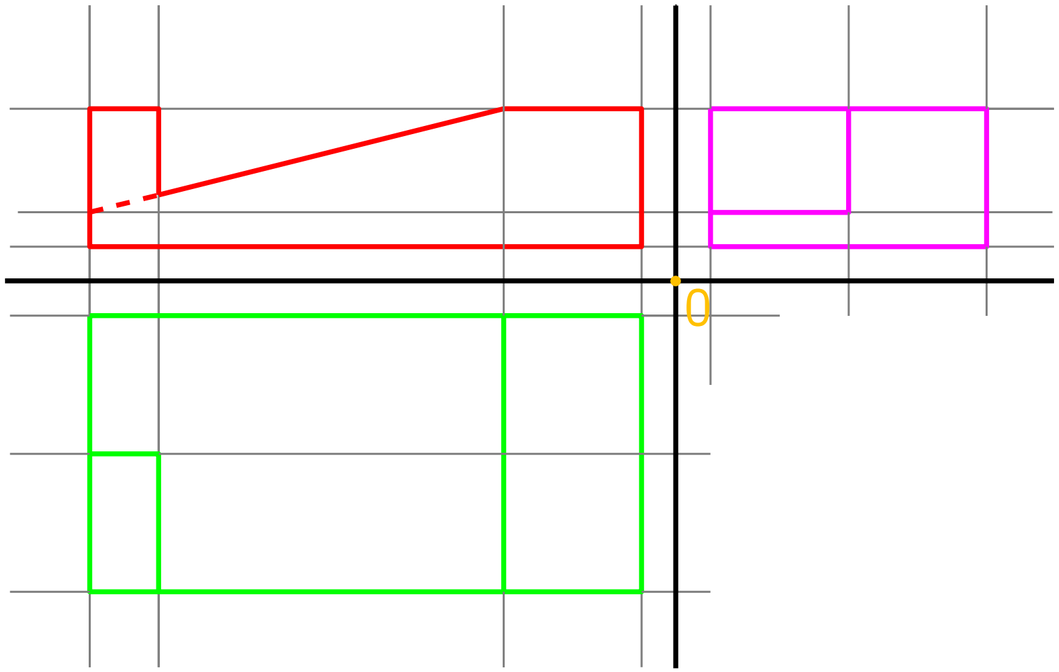
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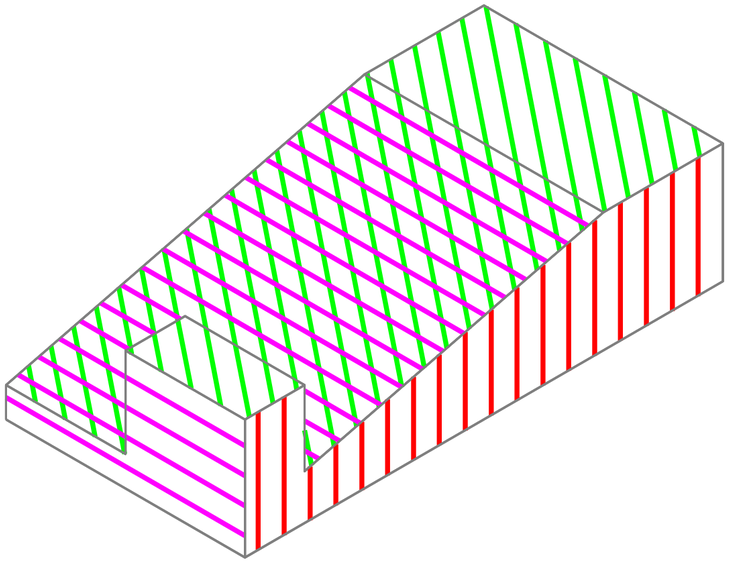

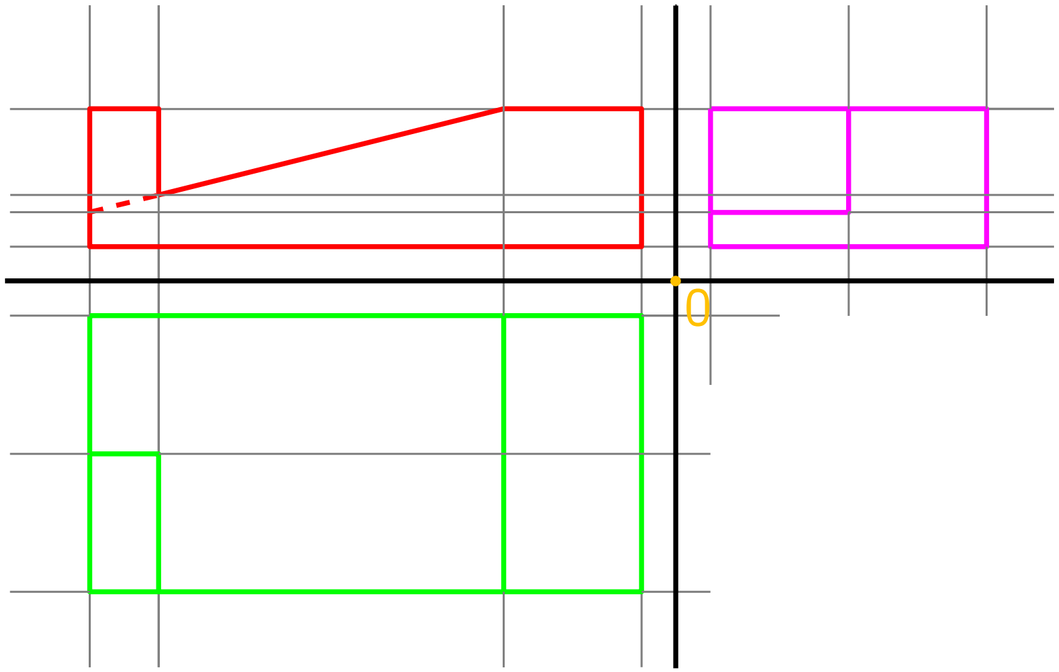
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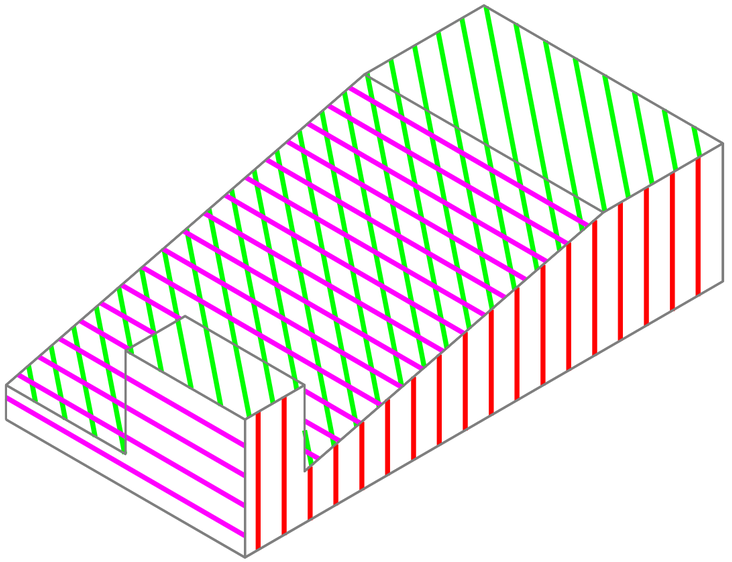

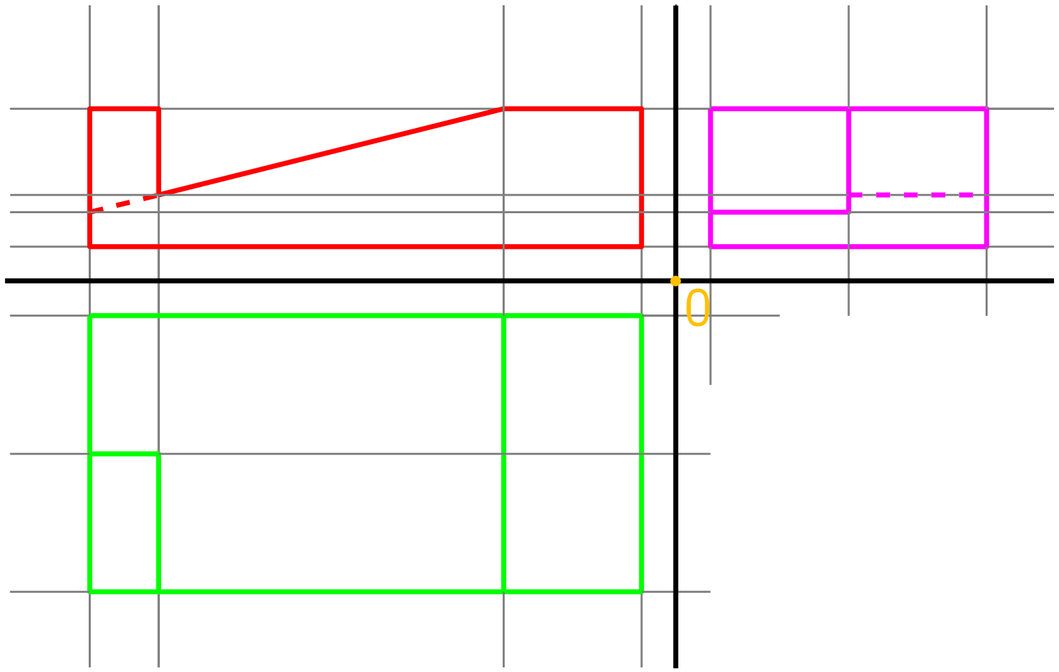
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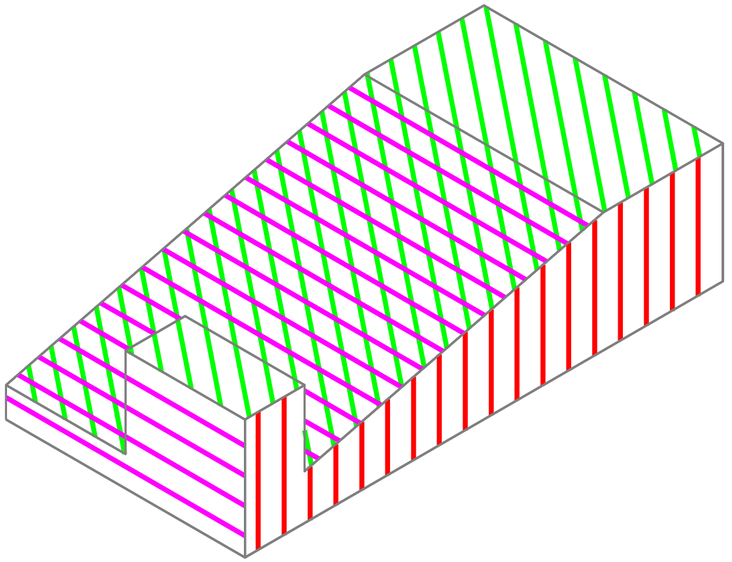
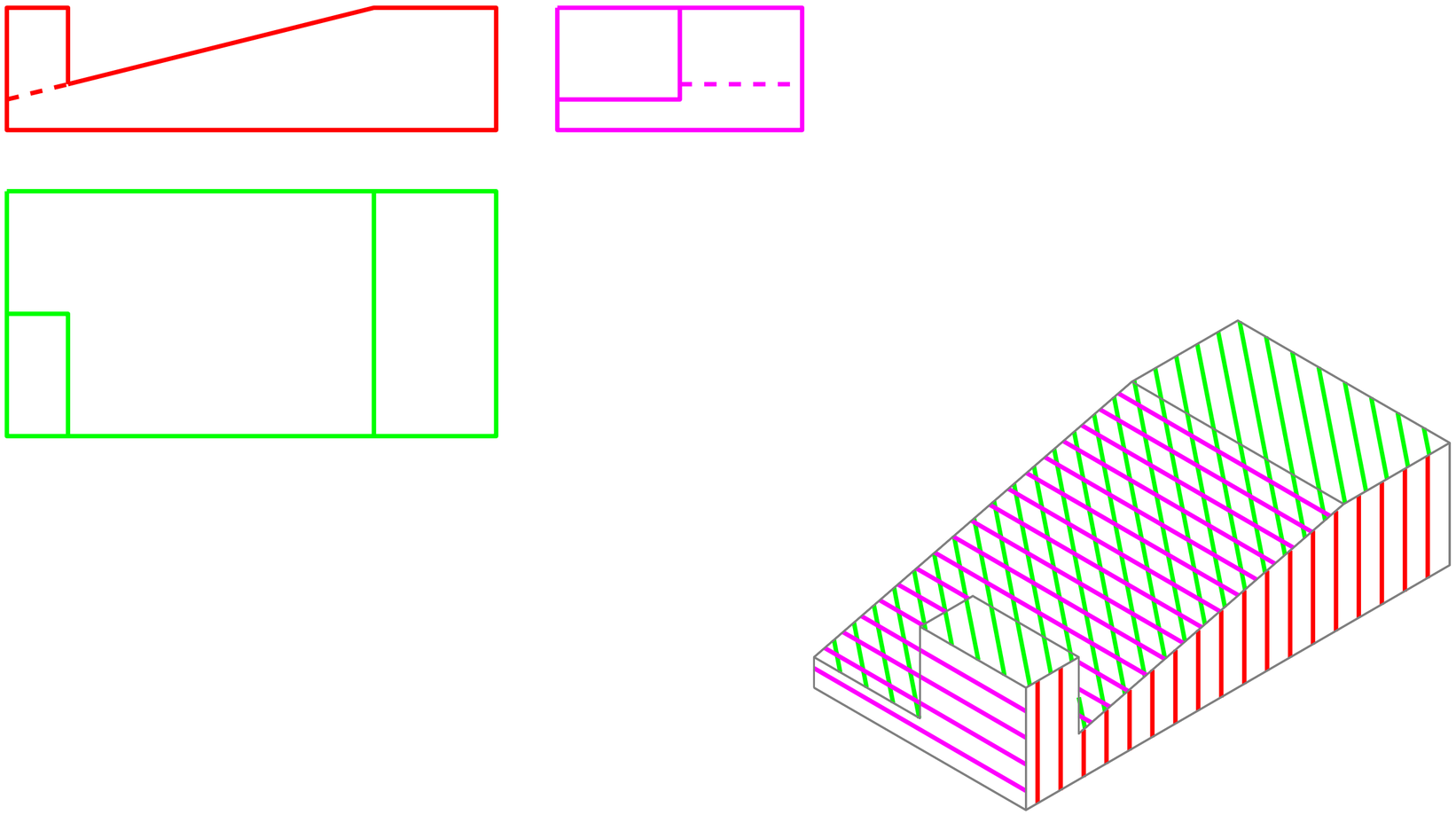
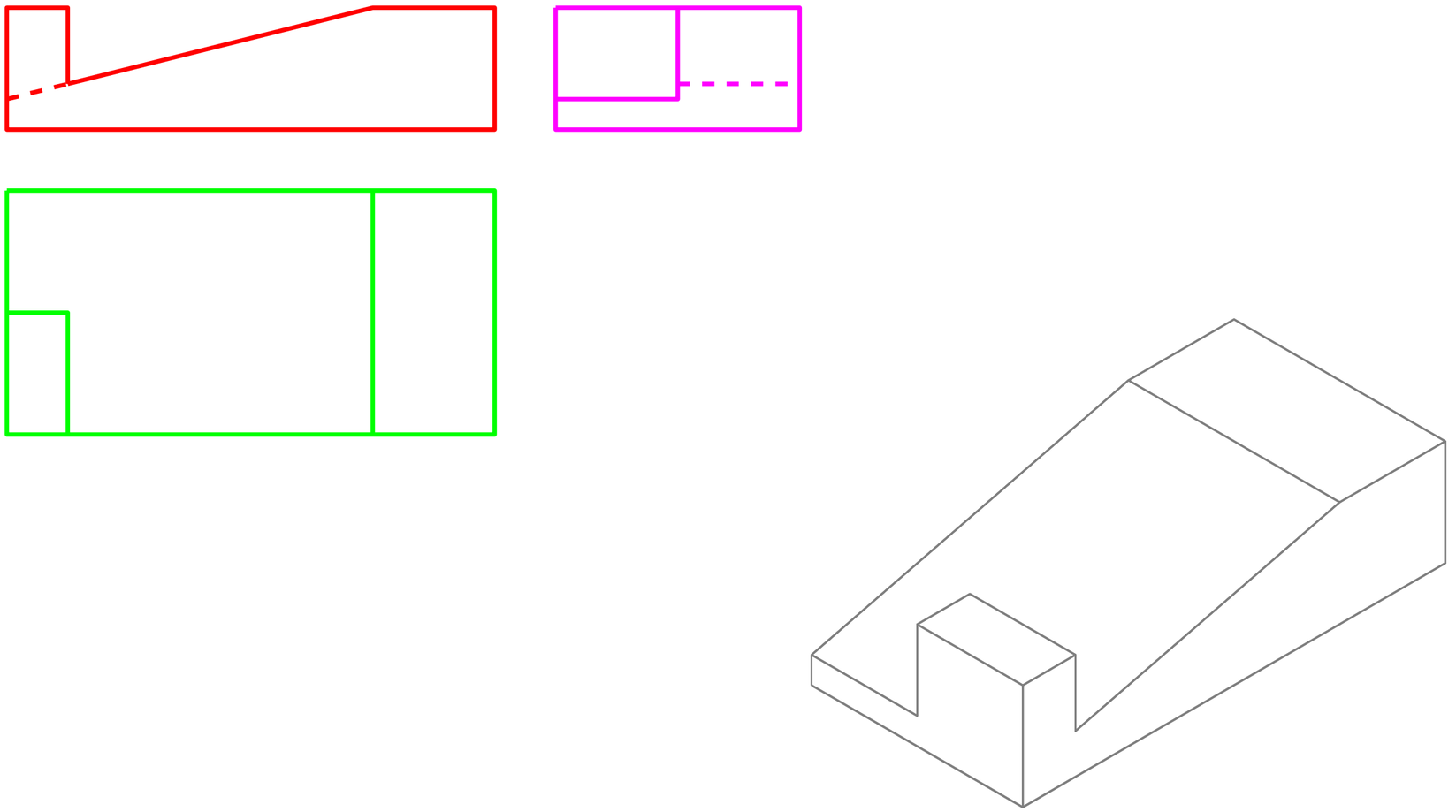
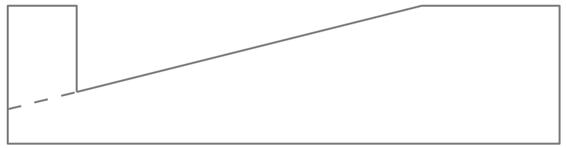
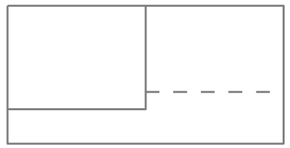
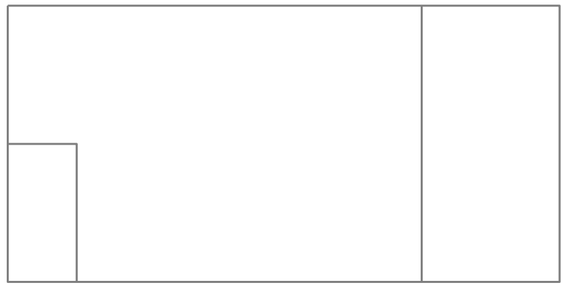


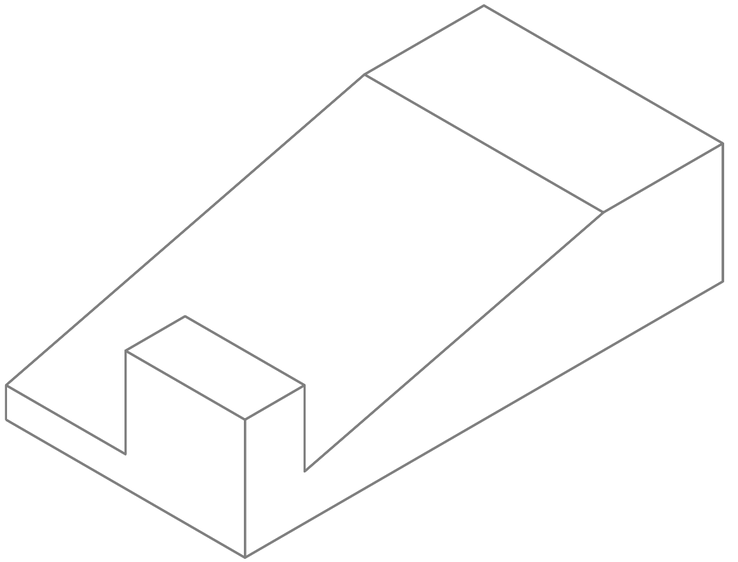










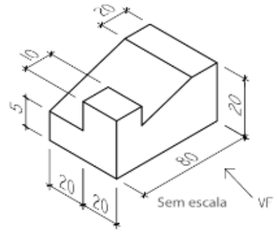


ATIVIDADES

E1 VISTAS ORTOGRÁFICAS

Desenhe em escala 1:1 as vistas frontal, superior e lateral esquerda da figura demonstrada. Considere a hierarquia indicada e mantenha as linhas de construção em sua natureza secundária.

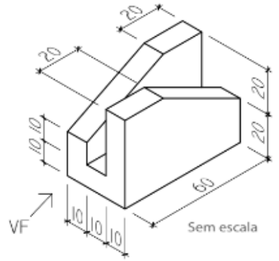
Hierarquia: 1. Peça 2. Eixos | **Unidade:** milímetro



E2 VISTAS ORTOGRÁFICAS

Desenhe em escala 1:1 as vistas frontal, superior e lateral esquerda da figura demonstrada. Considere a hierarquia indicada e mantenha as linhas de construção em sua natureza secundária.

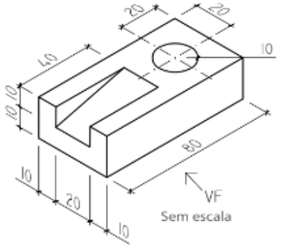
Hierarquia: 1. Peça 2. Eixos | **Unidade:** milímetro



E3 VISTAS ORTOGRÁFICAS

Desenhe em escala 1:1 as vistas frontal, superior e lateral esquerda da figura demonstrada. Considere a hierarquia indicada e mantenha as linhas de construção em sua natureza secundária.

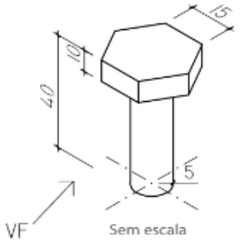
Hierarquia: 1. Peça 2. Eixos | **Unidade:** milímetro



E4 VISTAS ORTOGRÁFICAS

Desenhe em escala 1:1 as vistas frontal, superior e lateral esquerda da figura demonstrada. Considere a hierarquia indicada e mantenha as linhas de construção em sua natureza secundária.

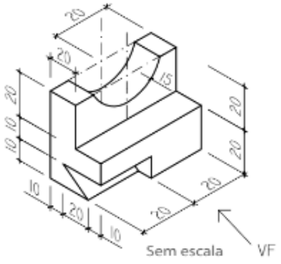
Hierarquia: 1. Peça 2. Eixos | **Unidade:** milímetro



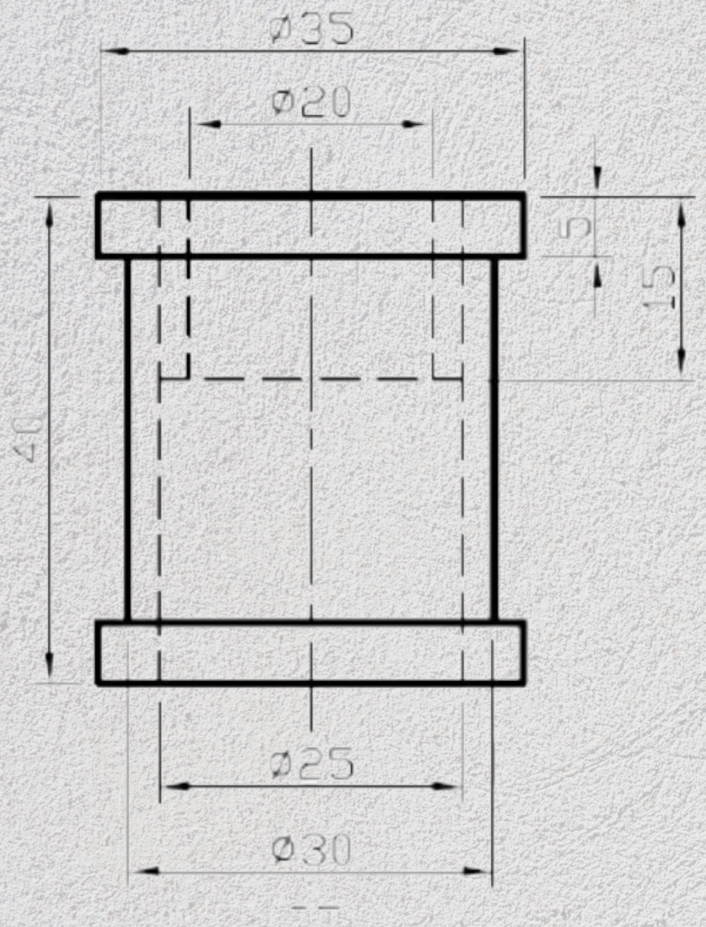
E5 VISTAS ORTOGRÁFICAS

Desenhe em escala 1:1 todas as seis vistas da figura demonstrada. Respeite um espaçamento de 10mm entre vistas (5mm entre vista e eixos, opcionais) e mantenha as linhas de construção em sua natureza secundária.

Hierarquia: 1. Peça | **Unidade:** milímetro



CORTE TOTAL


ø35
ø20
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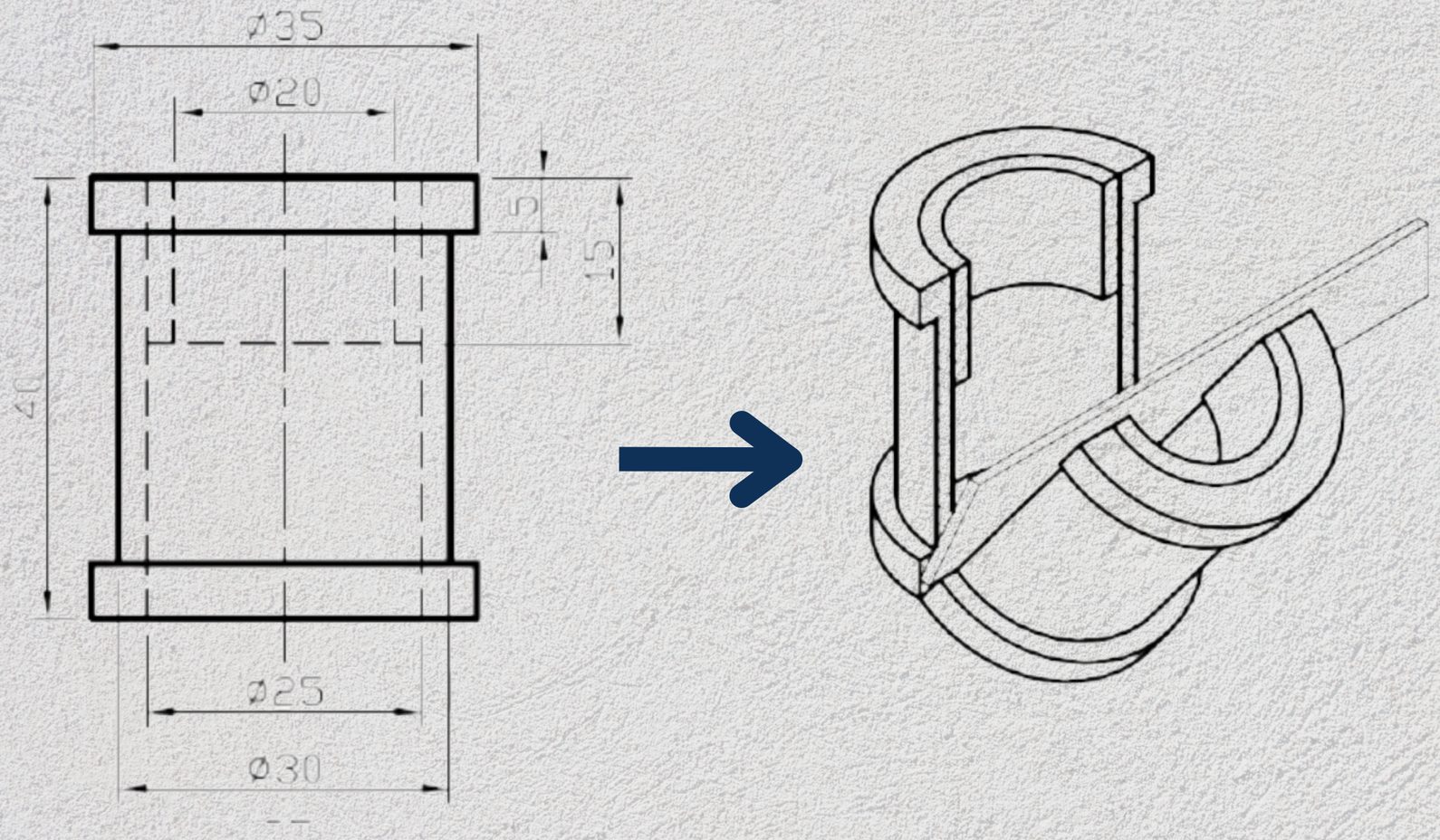
ø25
ø30


ø35
ø20
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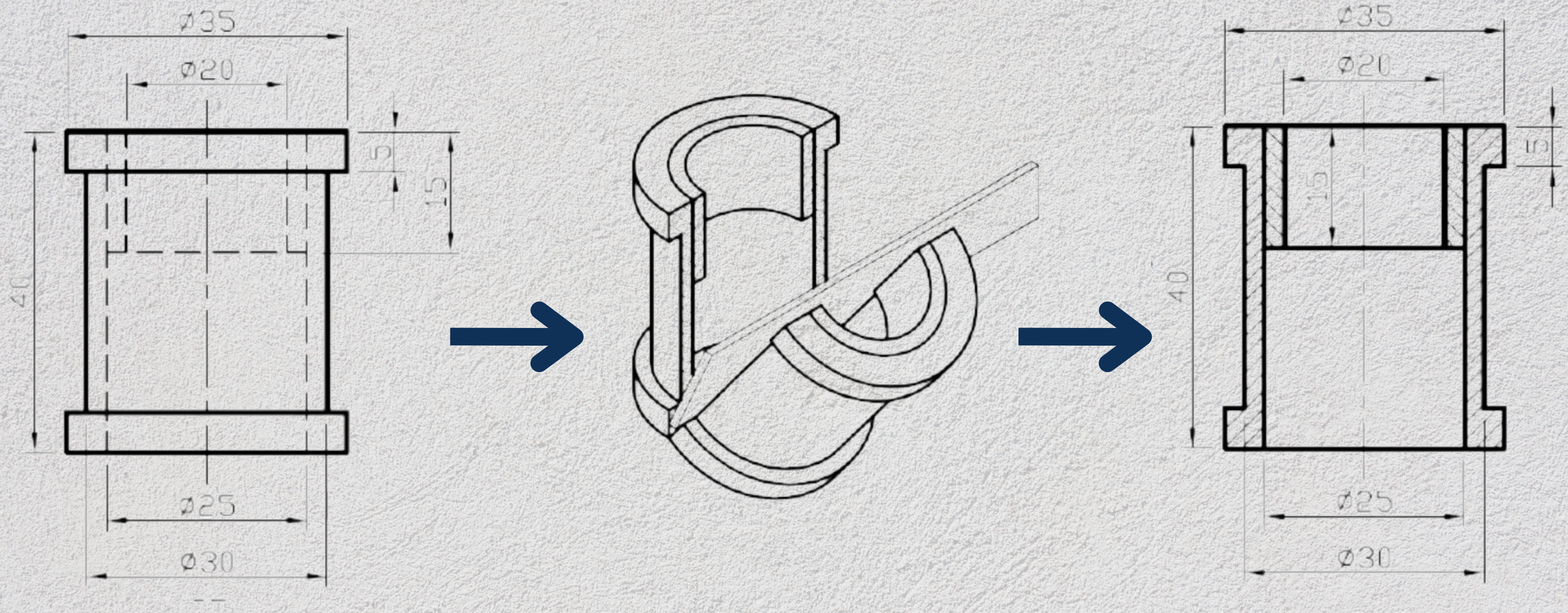
ø25
ø30


ø35
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ø35
ø20
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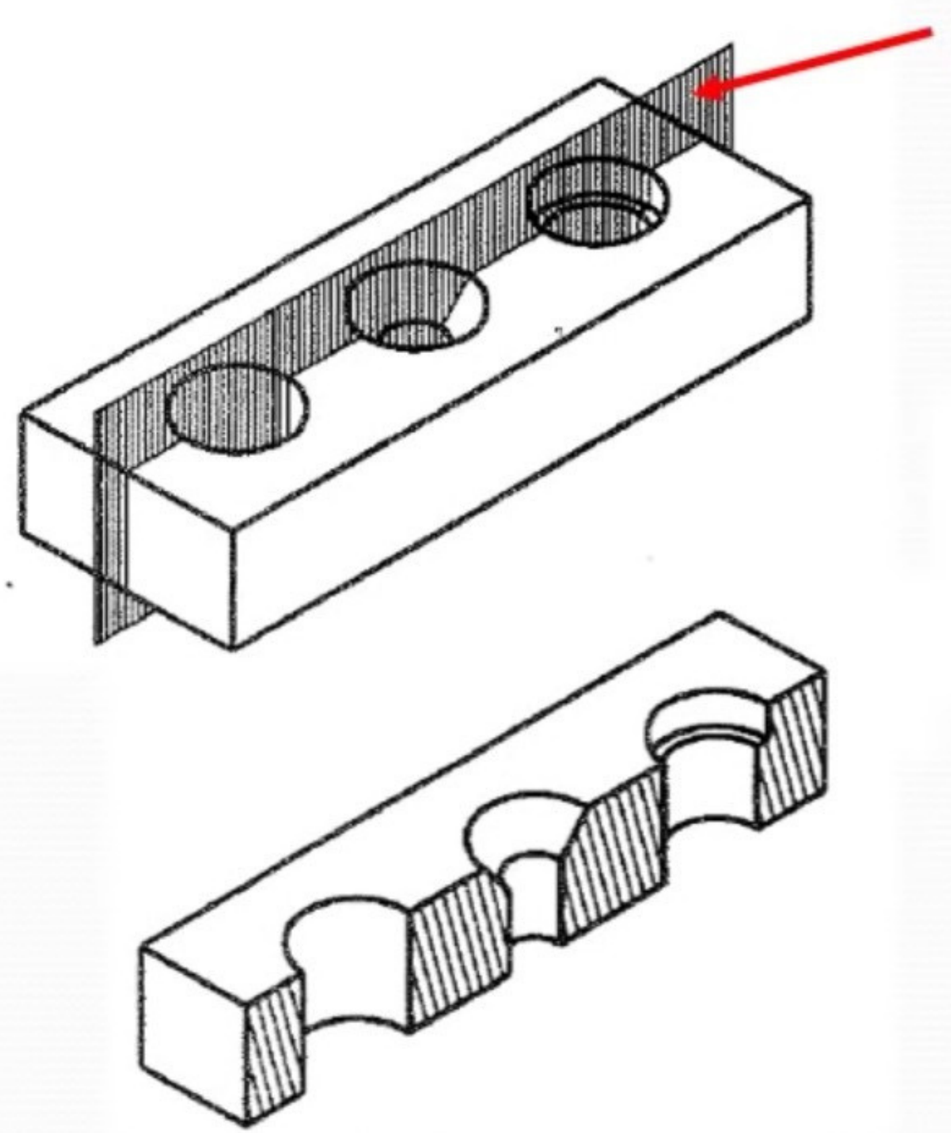
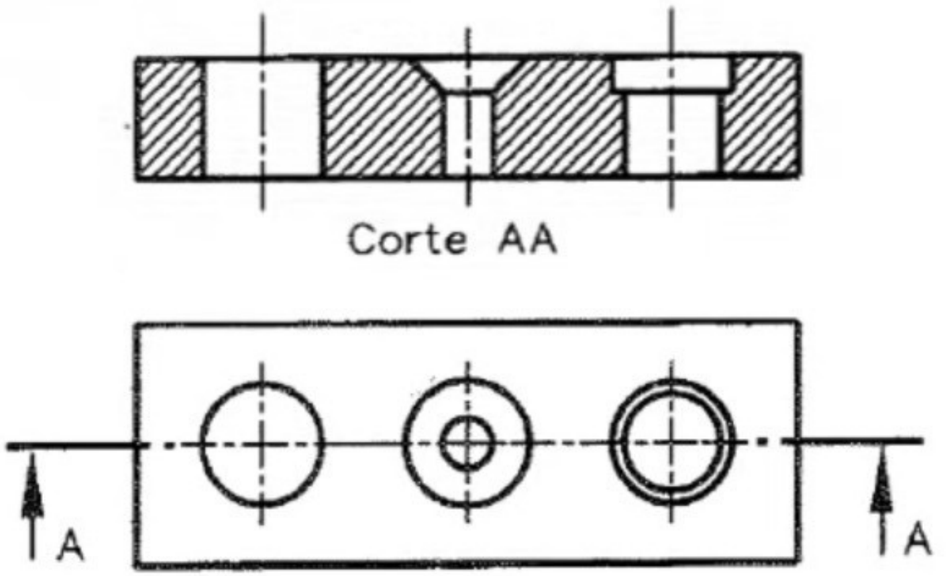
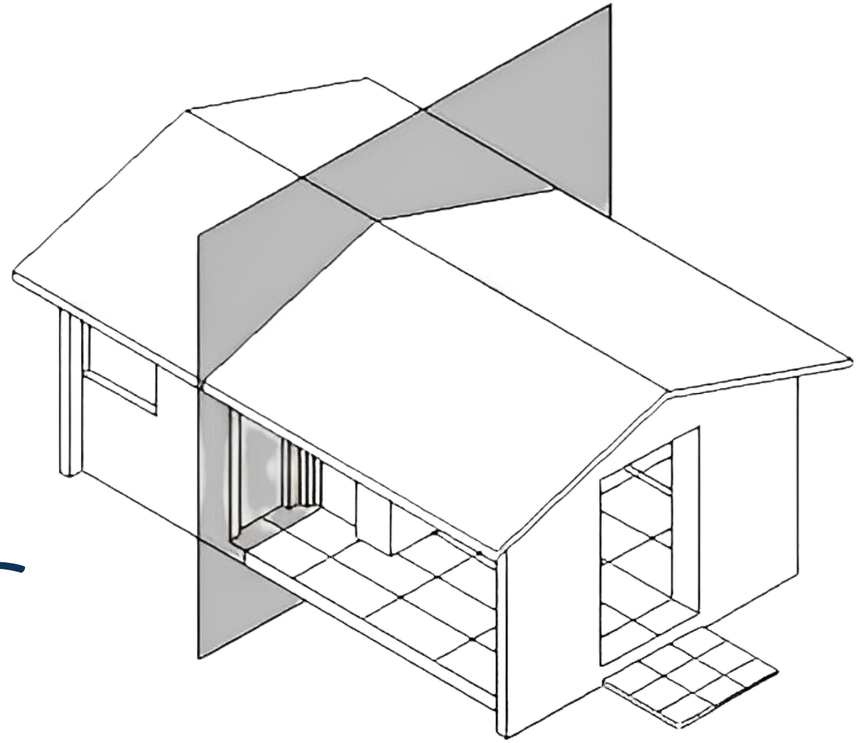
ø30


Plano de corte

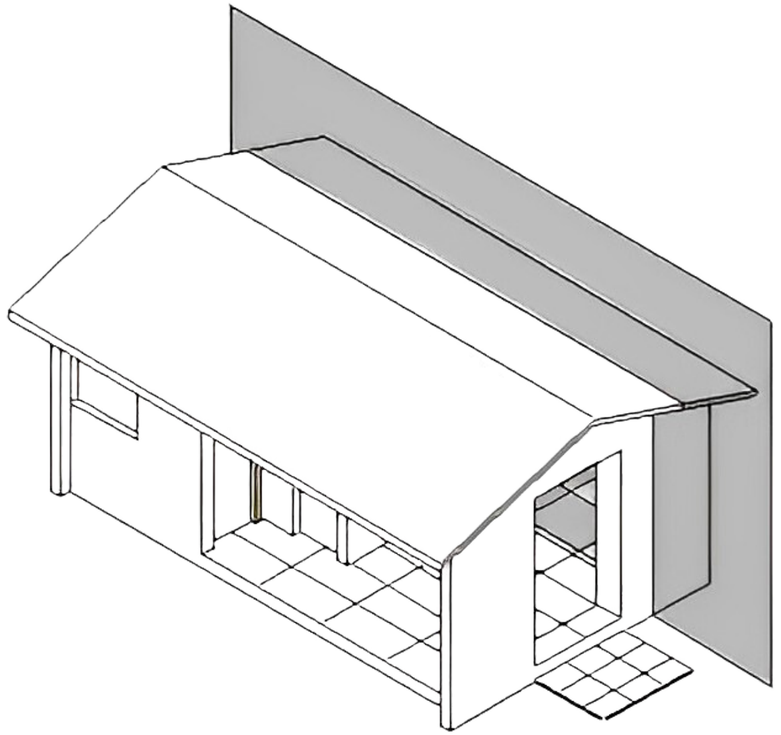

Corte AA
A
A

CORTE TRANSVERSAL



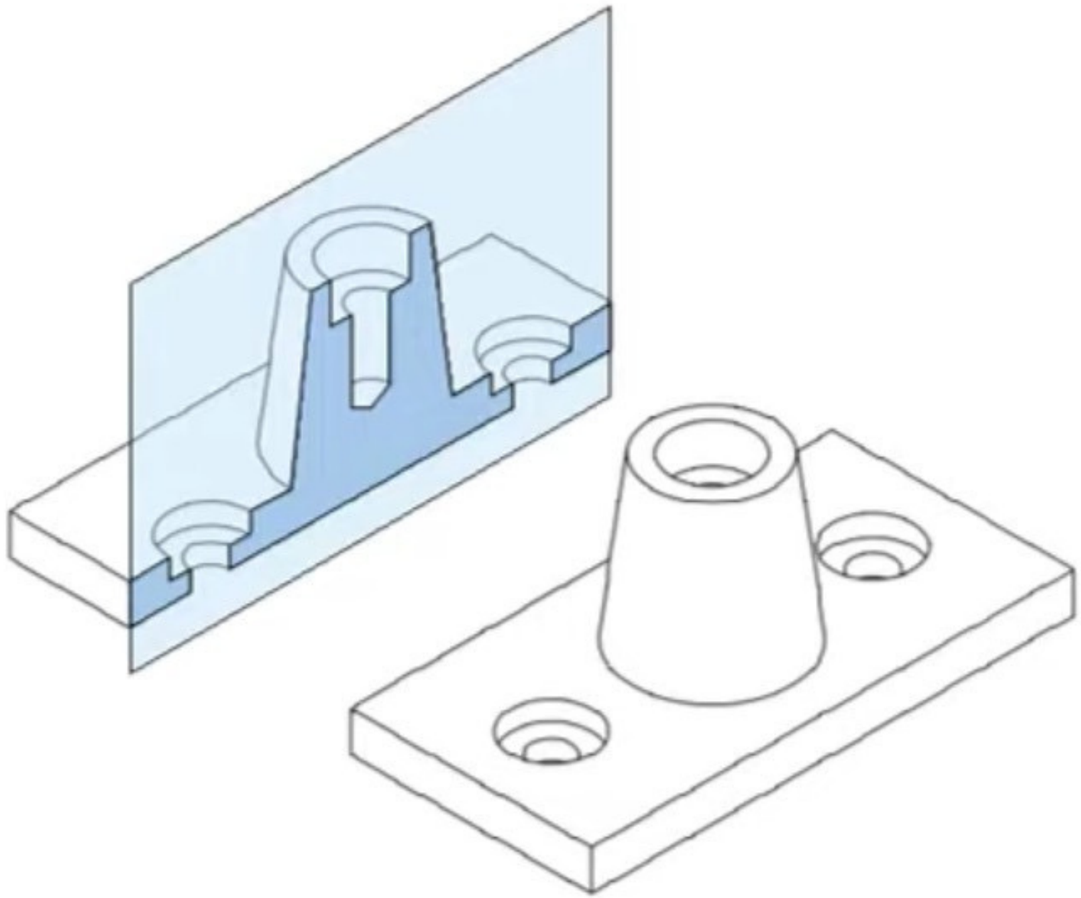
NO SENTIDO DA MENOR DIMENSÃO

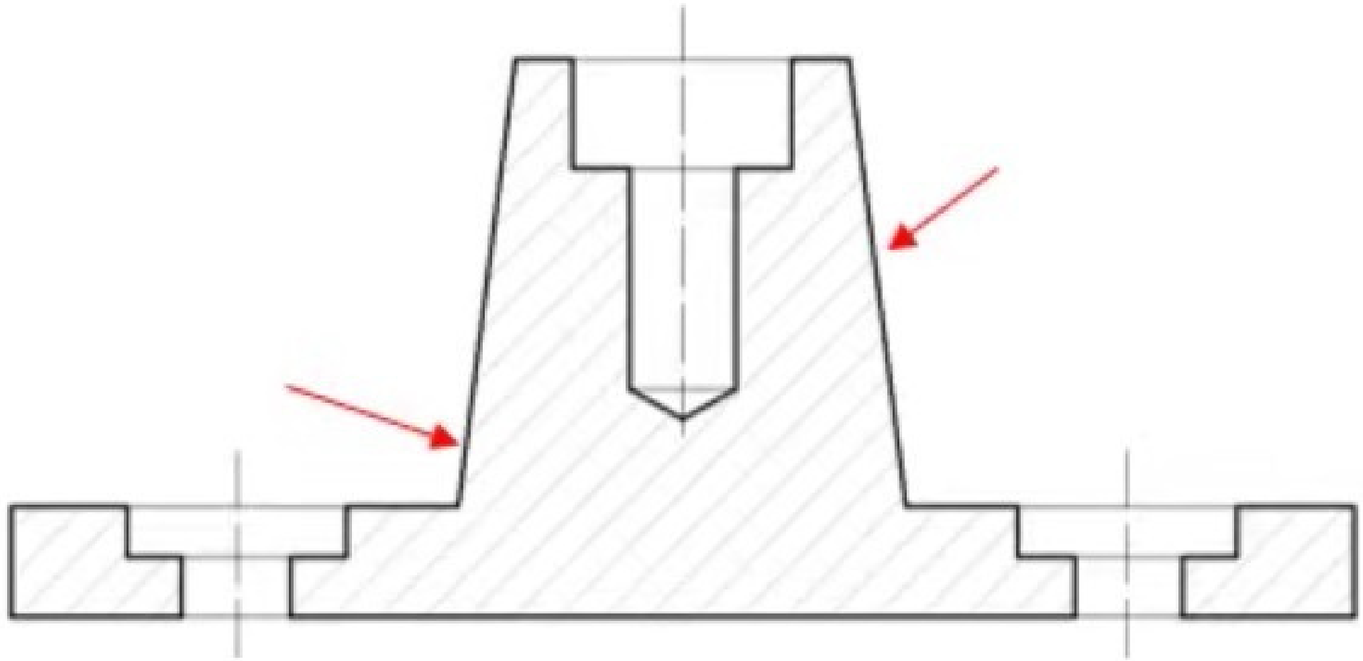
CORTE LONGITUDINAL



NO SENTIDO DA MAIOR DIMENSÃO

NORMAS





NORMAS PARA CONSULTA

ABR 1994 | NBR 6492

Representação de projetos de arquitetura

ABNT-Associ
Brasileira de
Normas Técn

ABNT-Associação
Brasileira de
Normas Técnicas

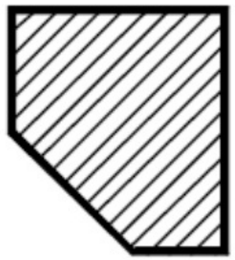
ABR 1995 | NBR 12298

Representação de área de corte por meio de hachuras em desenho técnico

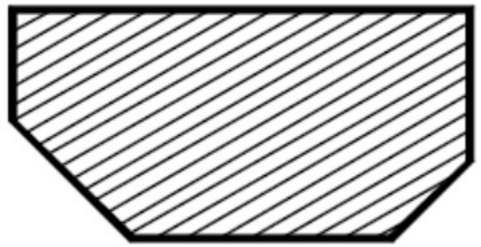
HACHURAS

AS HACHURAS NÃO DEVEM TER A MESMA INCLINAÇÃO DAS ARESTAS DAS PEÇAS, NEM DAS COTAS. TAMBÉM NÃO DEVEM INTERCEPAR DIMENSÕES

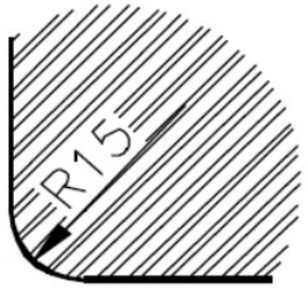
Errado



Correto



Correto



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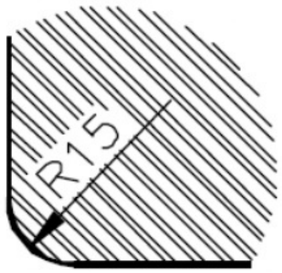

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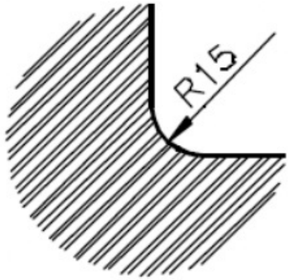
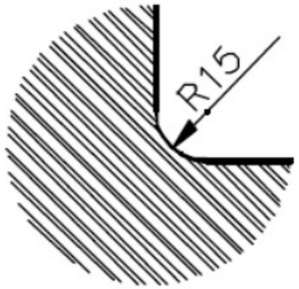
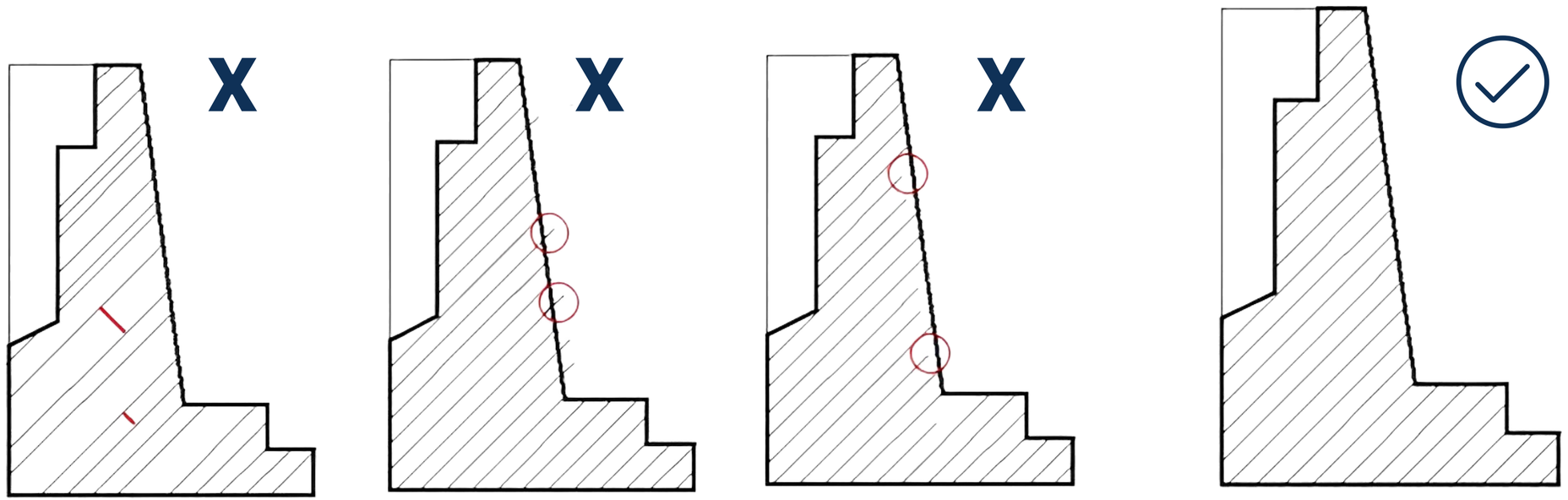


Errado

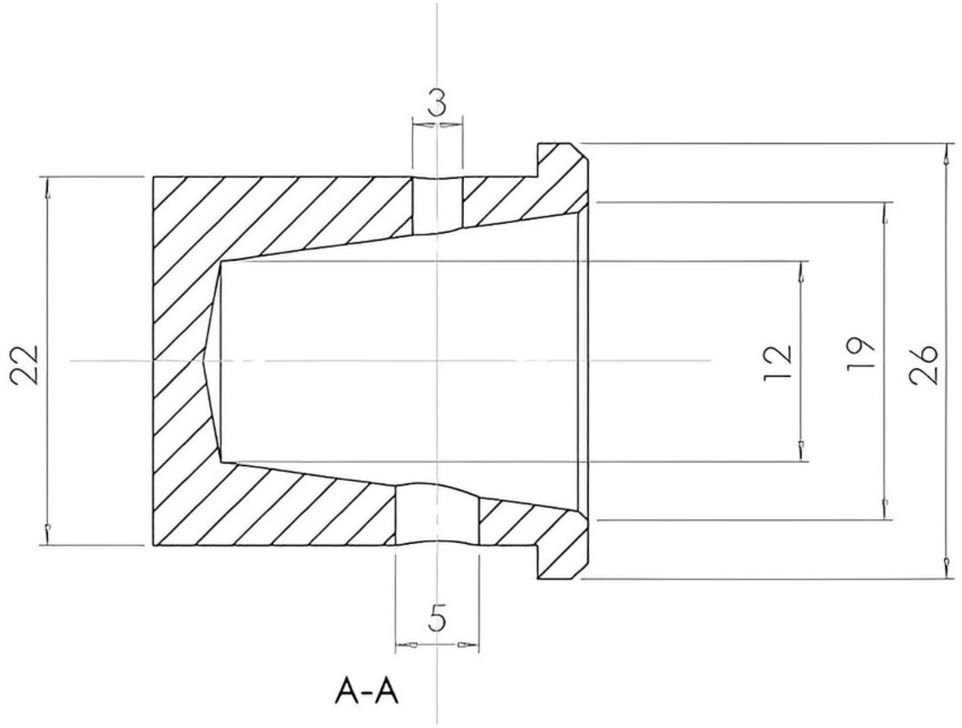


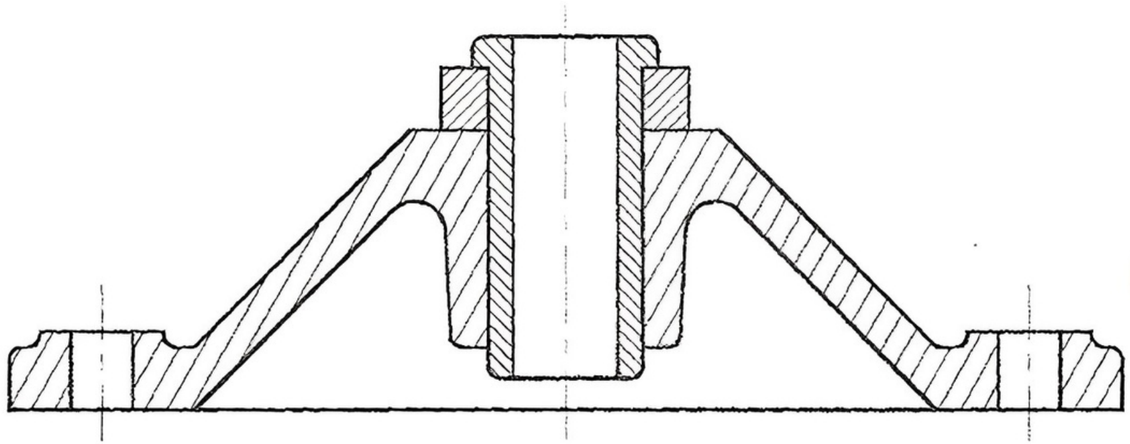
Correto

HACHURAS

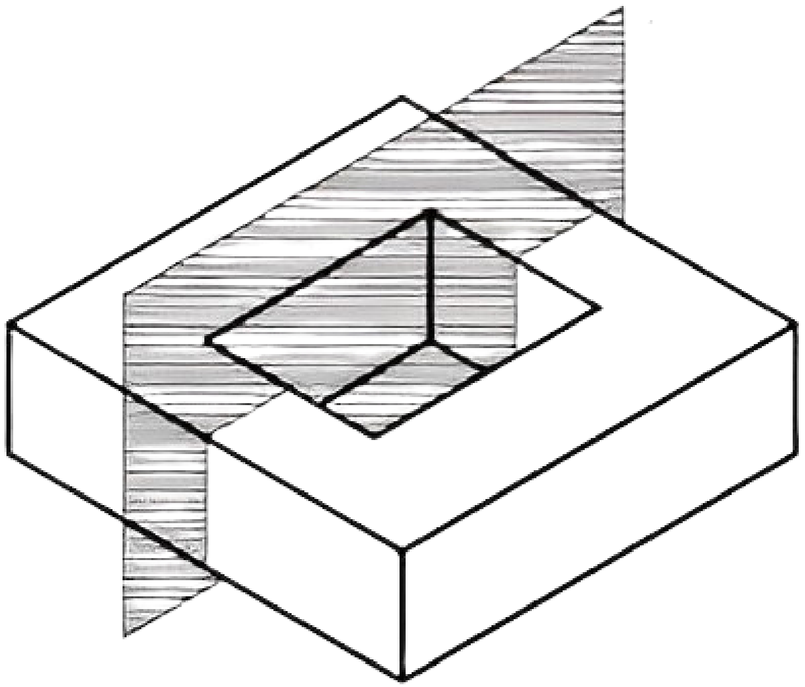


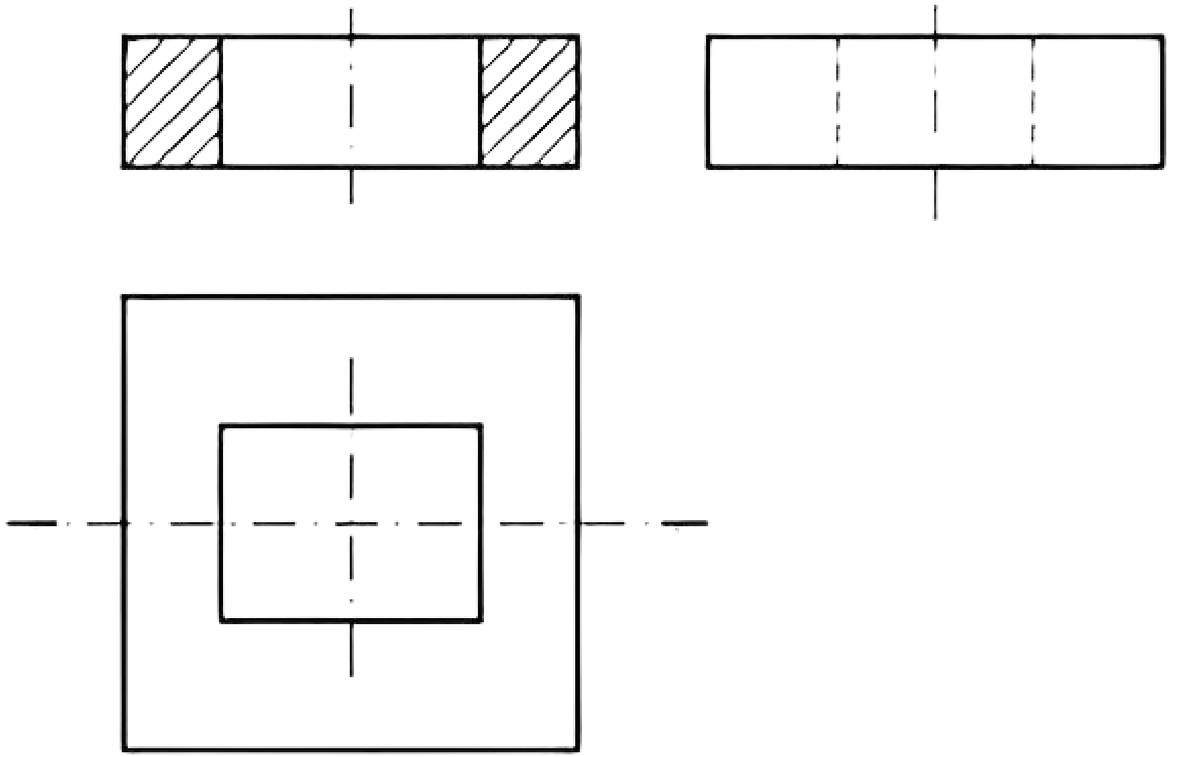
EXEMPLOS



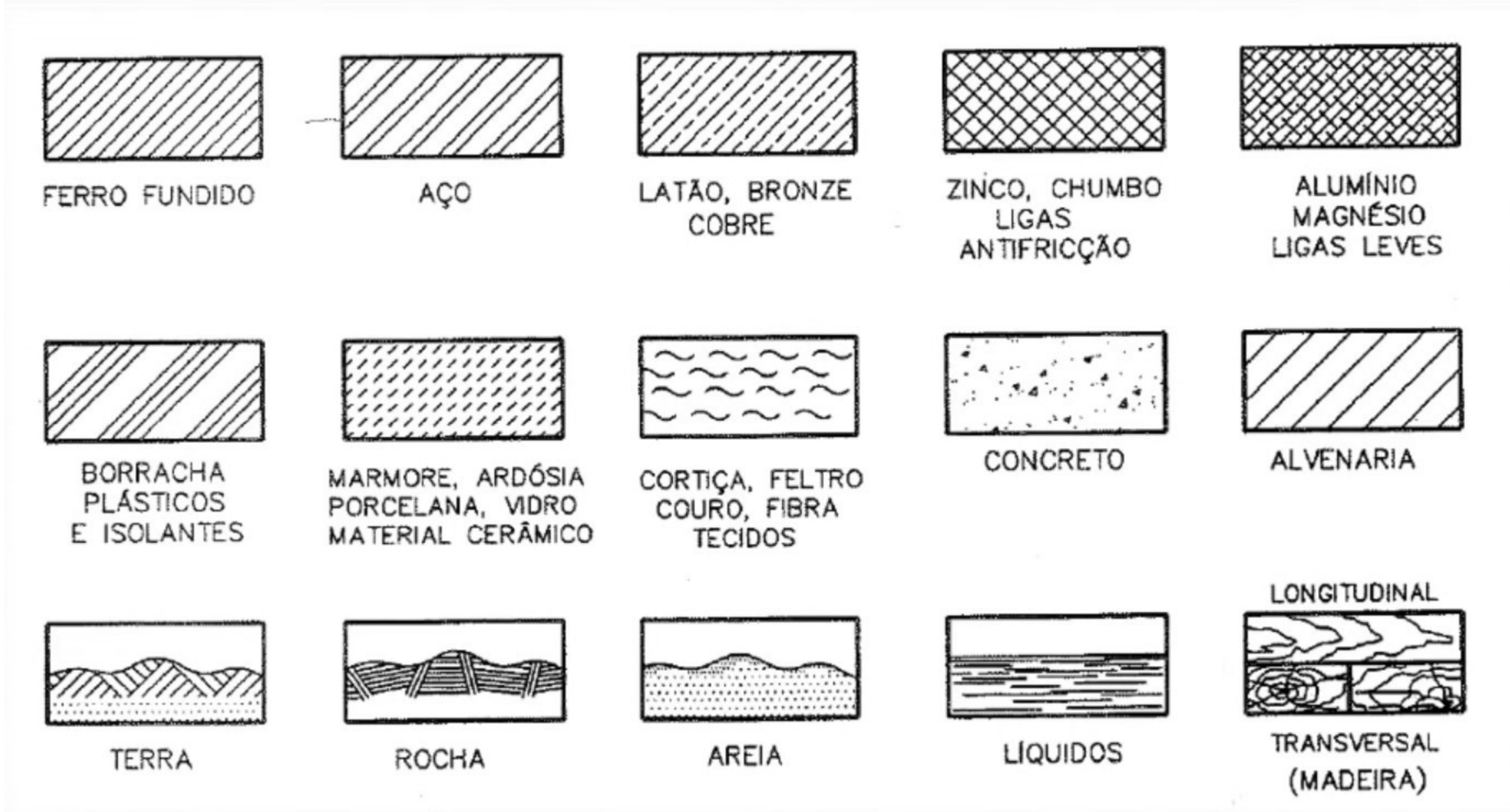


EXEMPLOS





EXEMPLOS: TEXTURAS



LEGO TOY BUILDING BRICK

G.K. CHRISTIANSEN
PATENTED OCT 24, 1961
NO. 3,005,282

FIG. 1.

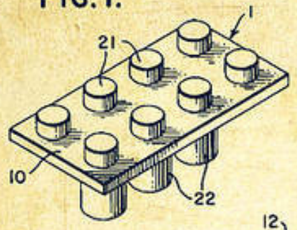


FIG. 2.

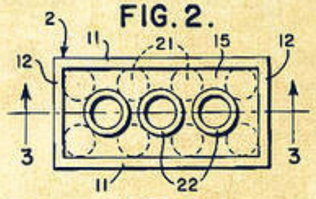


FIG. 3.

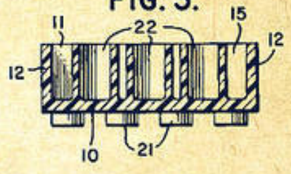


FIG. 4.

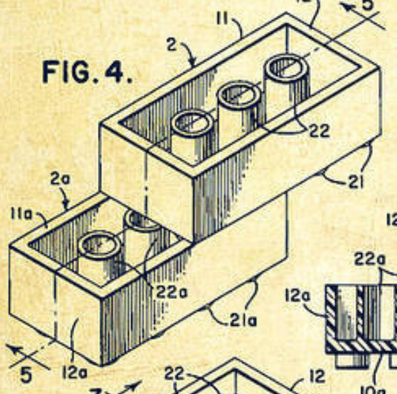


FIG. 5.

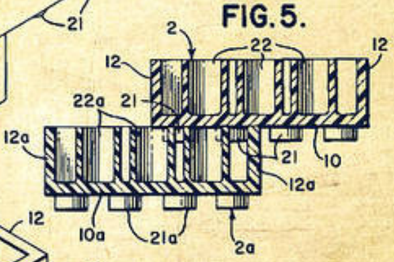
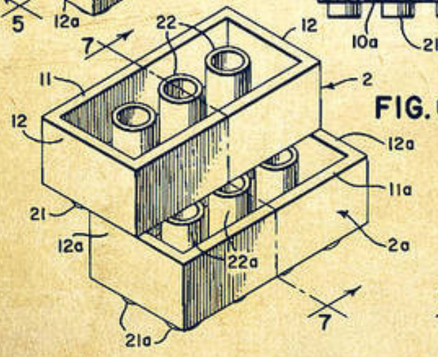
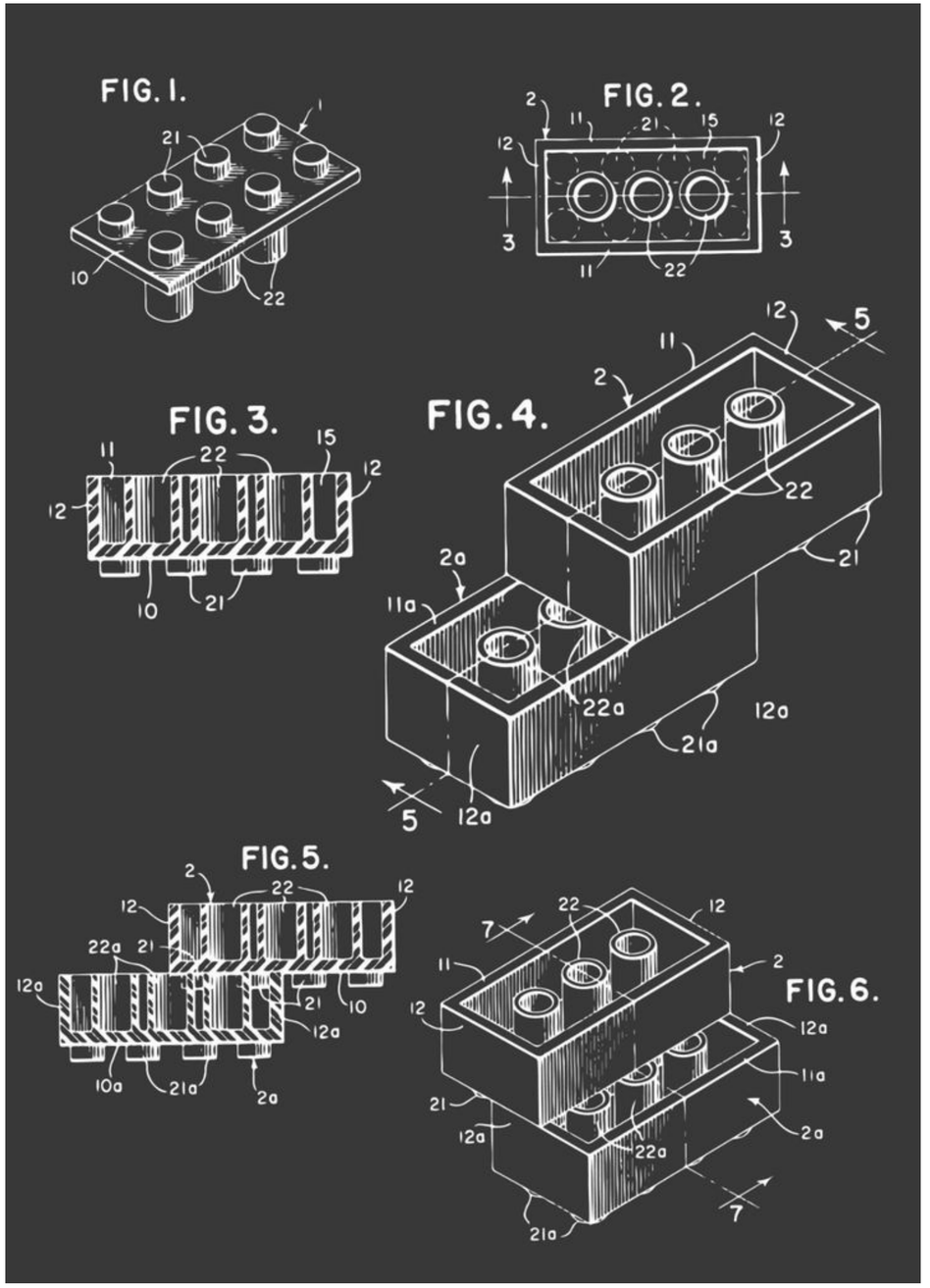


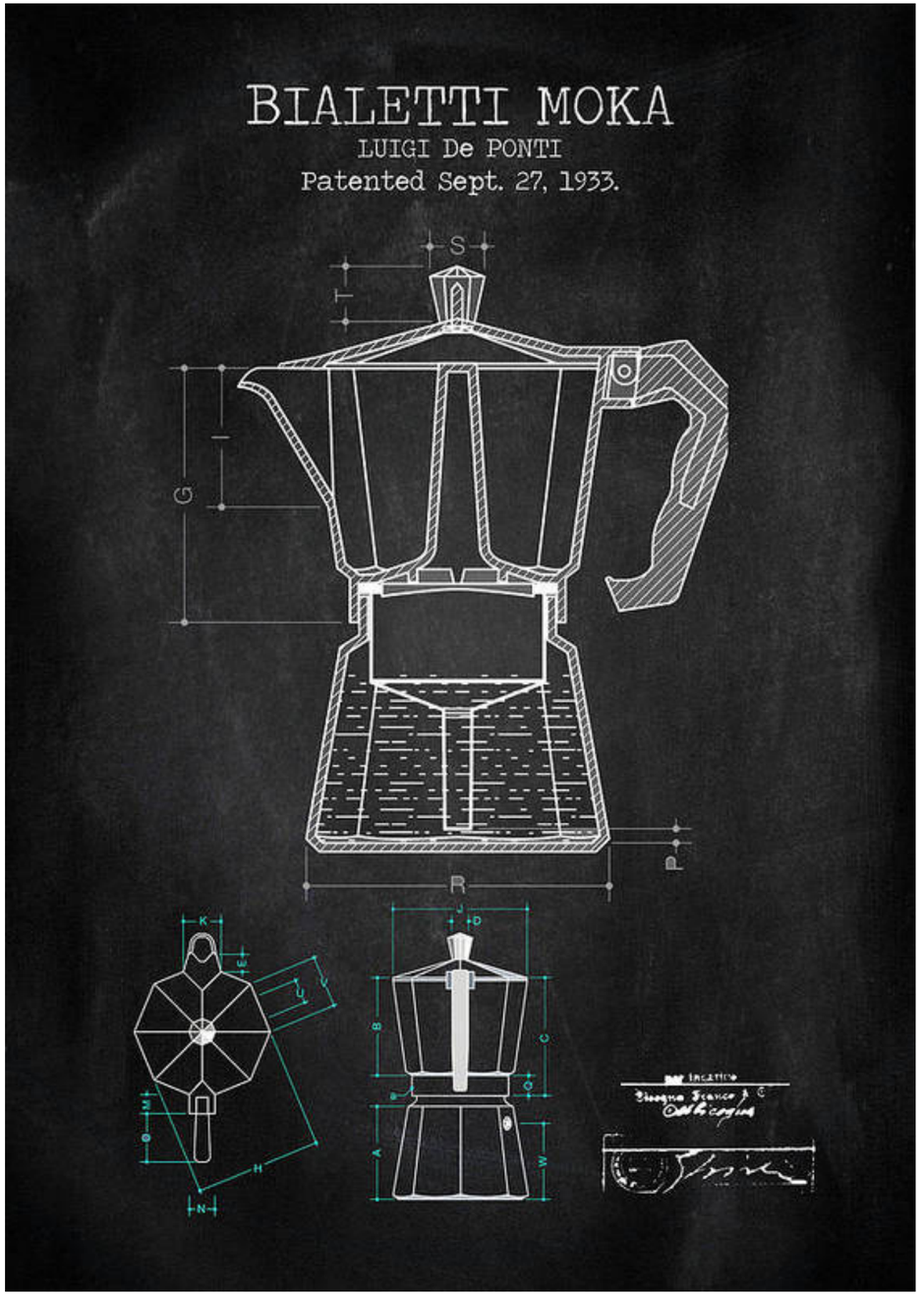
FIG. 6.



INVENTOR
Godtfred Kirk Christiansen

BY Stevens, Davis, Miller & Mosher
ATTORNEYS




BIALETTI MOKA
LUIGI De PONTI
Patented Sept. 27, 1933.
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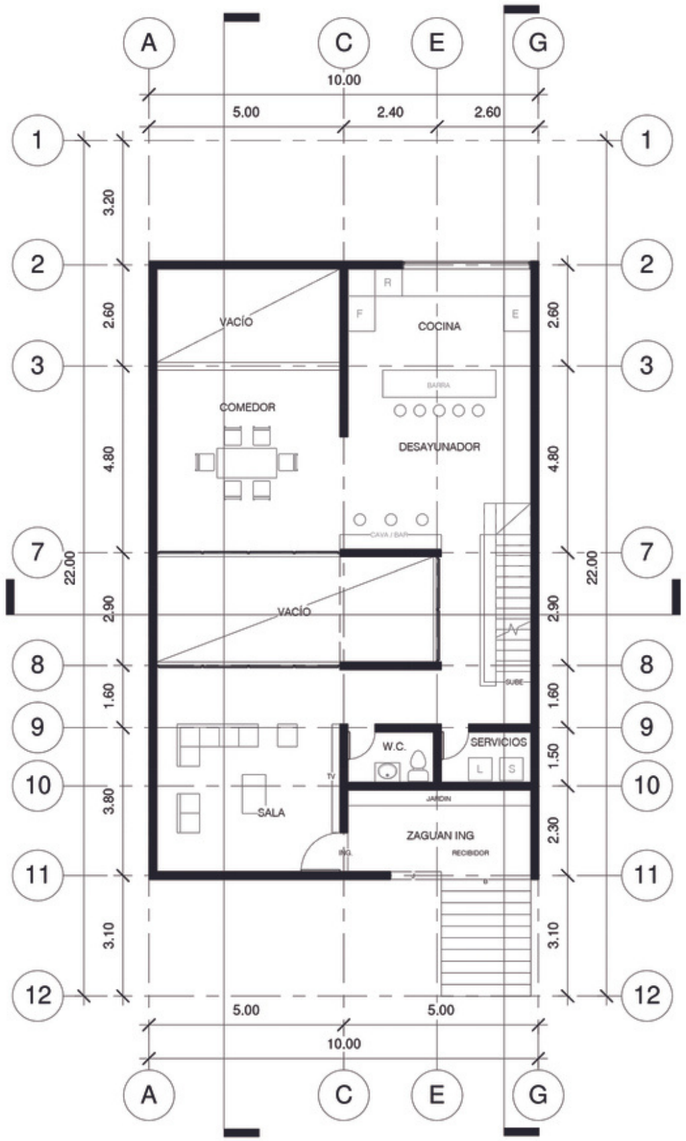
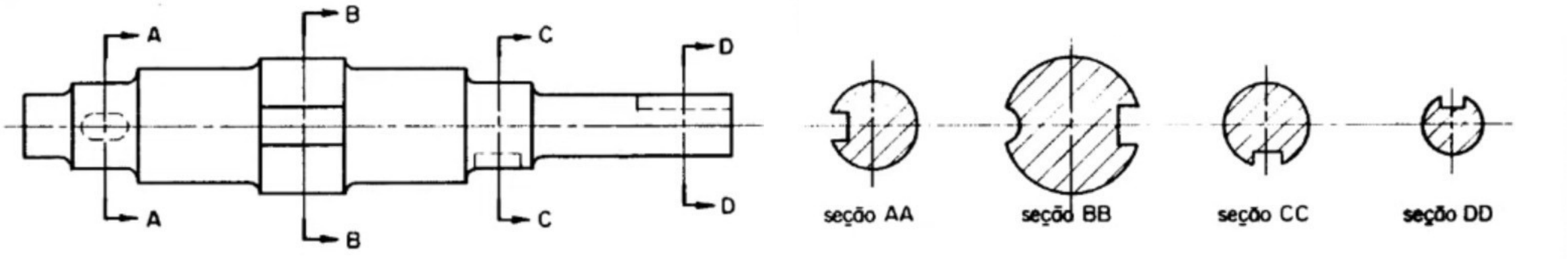


AS PLANTAS BAIXAS TAMBÉM SÃO CORTES

SEÇÃO



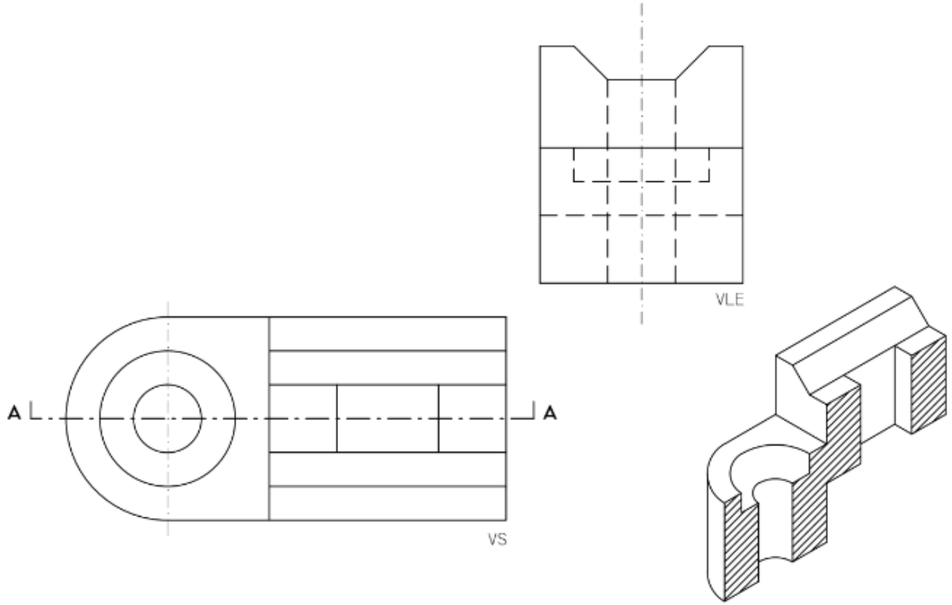
ATIVIDADES

F1

CORTE TOTAL

Desenhe no quadrante livre o corte AA da figura demonstrada. Mantenha as linhas de construção em sua natureza secundária.

Hierarquia: 1. Arestas do corte e hachuras 2. Demais arestas da peça



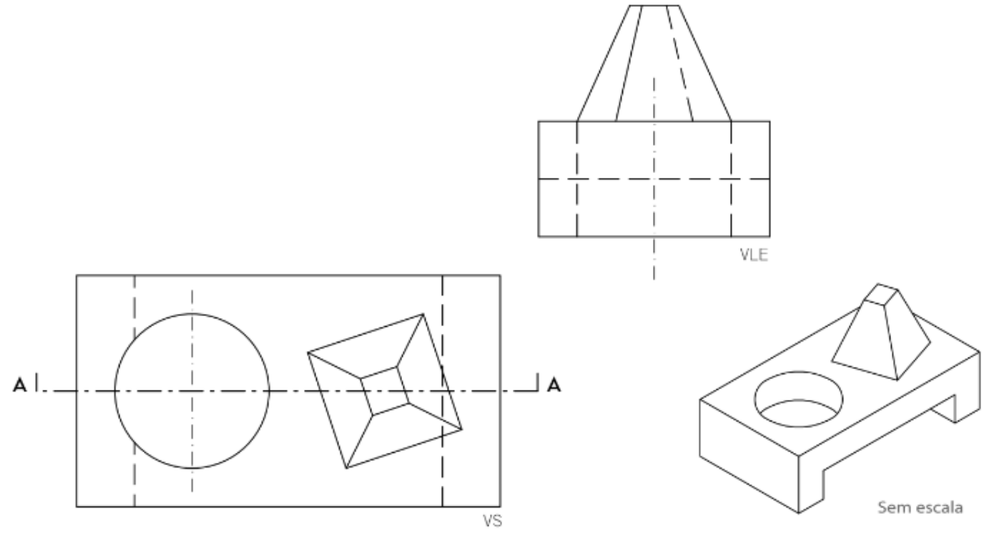
NOME _____ Nº USP _____

F2

CORTE TOTAL

Desenhe no quadrante livre o corte AA da figura demonstrada. Mantenha as linhas de construção em sua natureza secundária.

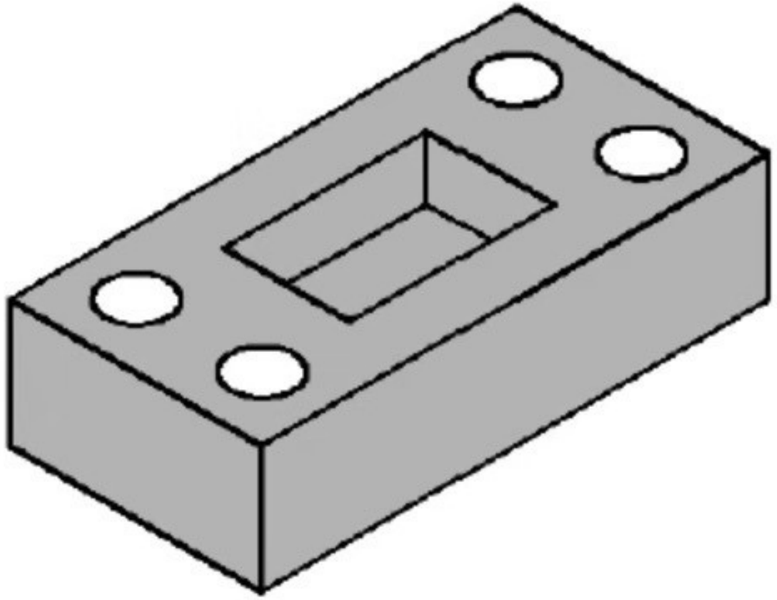
Hierarquia: 1. Arestas do corte e hachuras 2. Demais arestas da peça

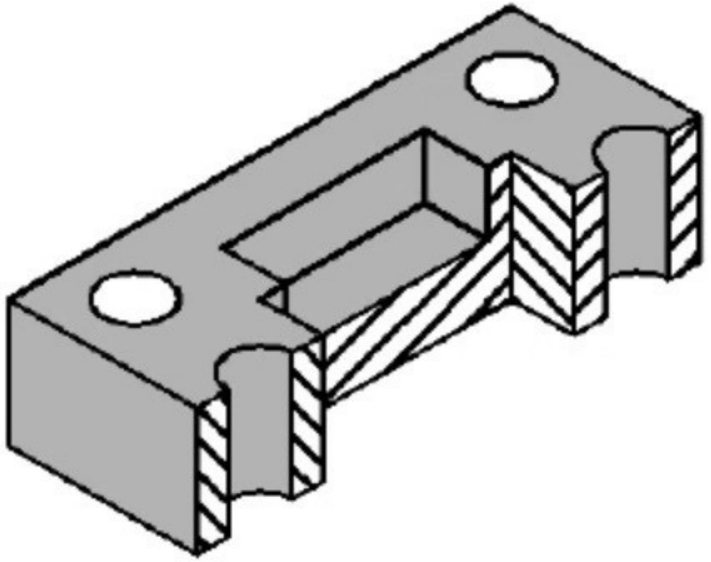


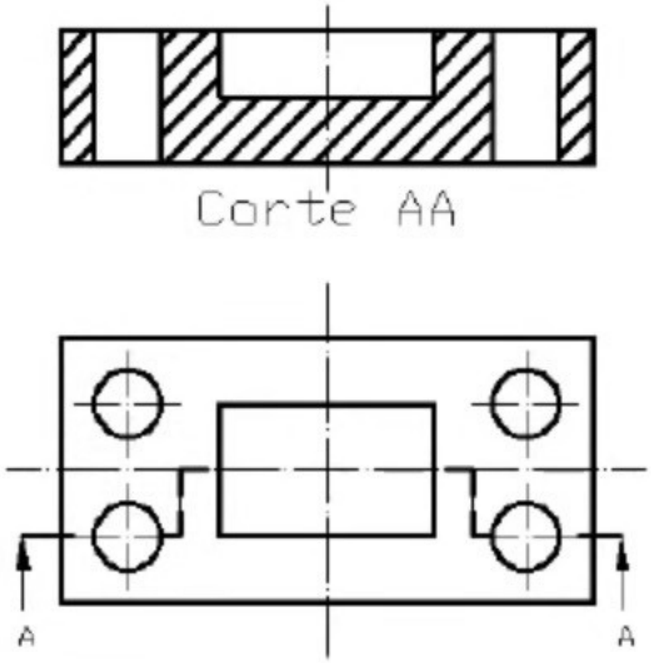
NOME _____ Nº USP _____

CORTE COM DESVIO

EXEMPLOS

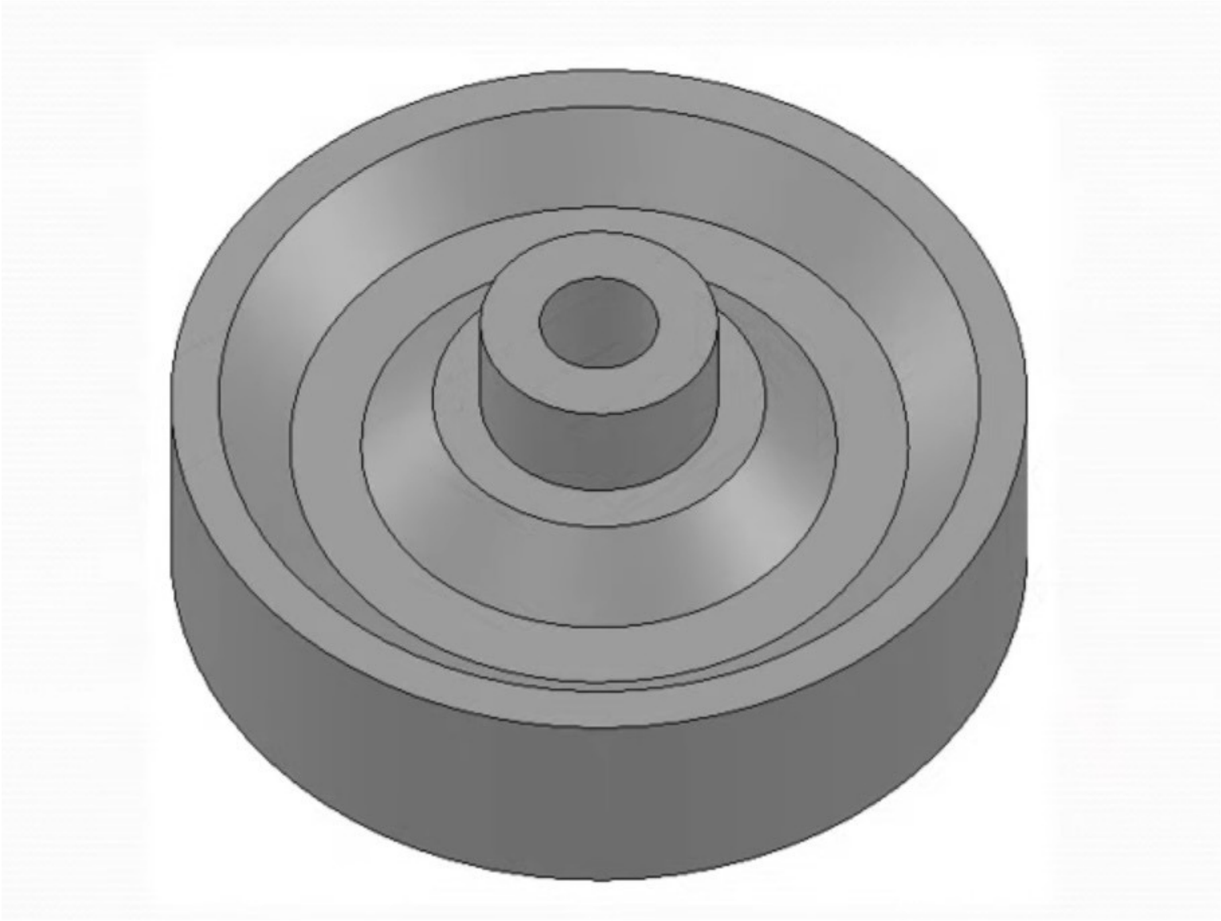




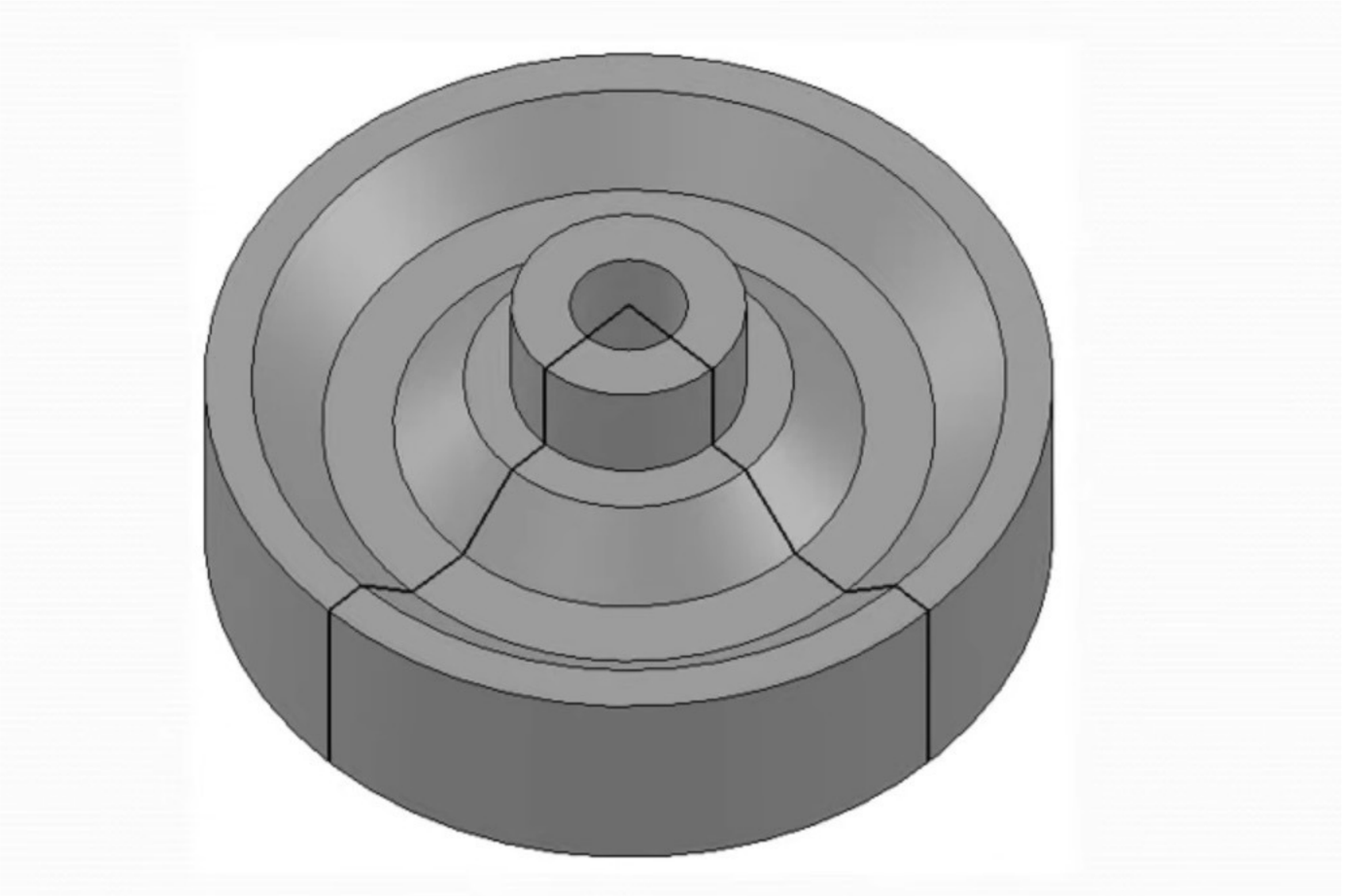


corte com desvio

MEIO CORTE

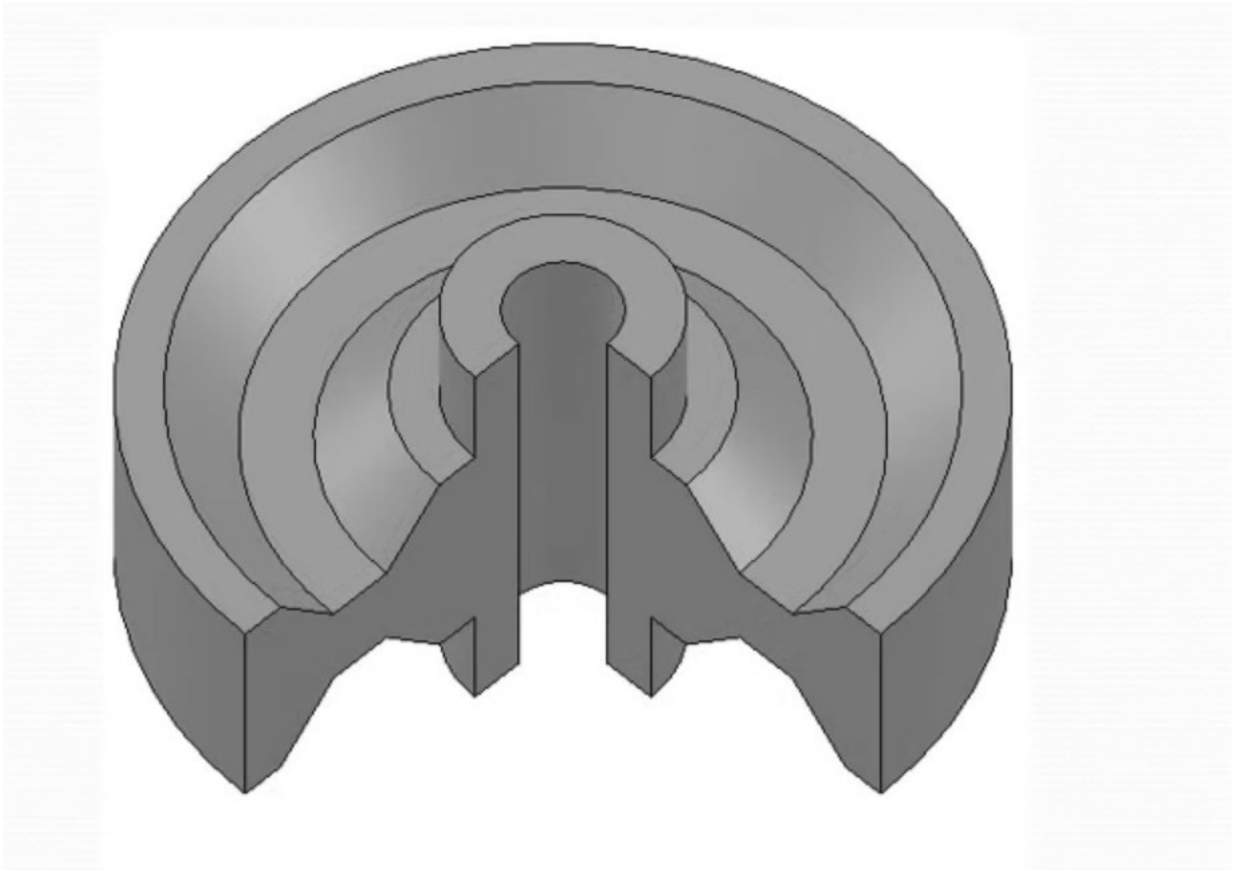


MEIO CORTE



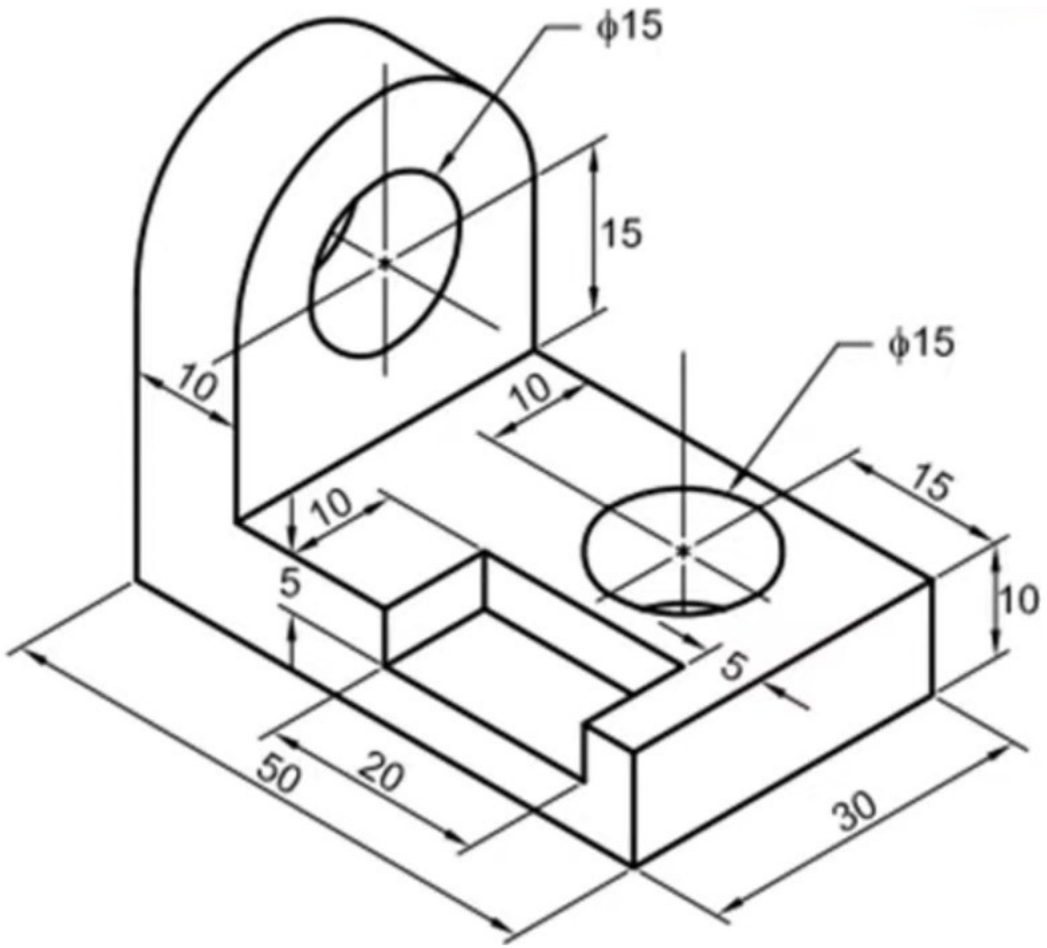
meio corte

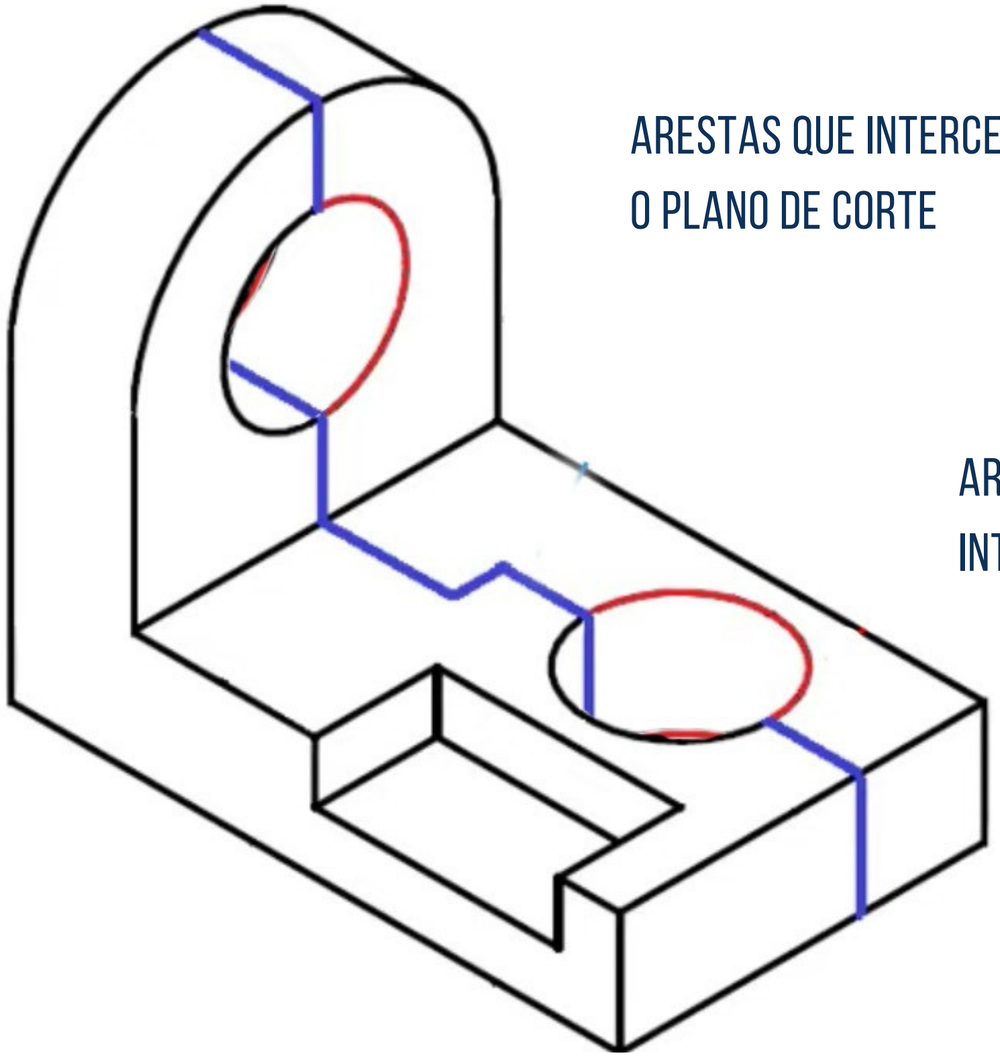
MEIO CORTE



CORTE COM DESVIO

EXEMPLO:

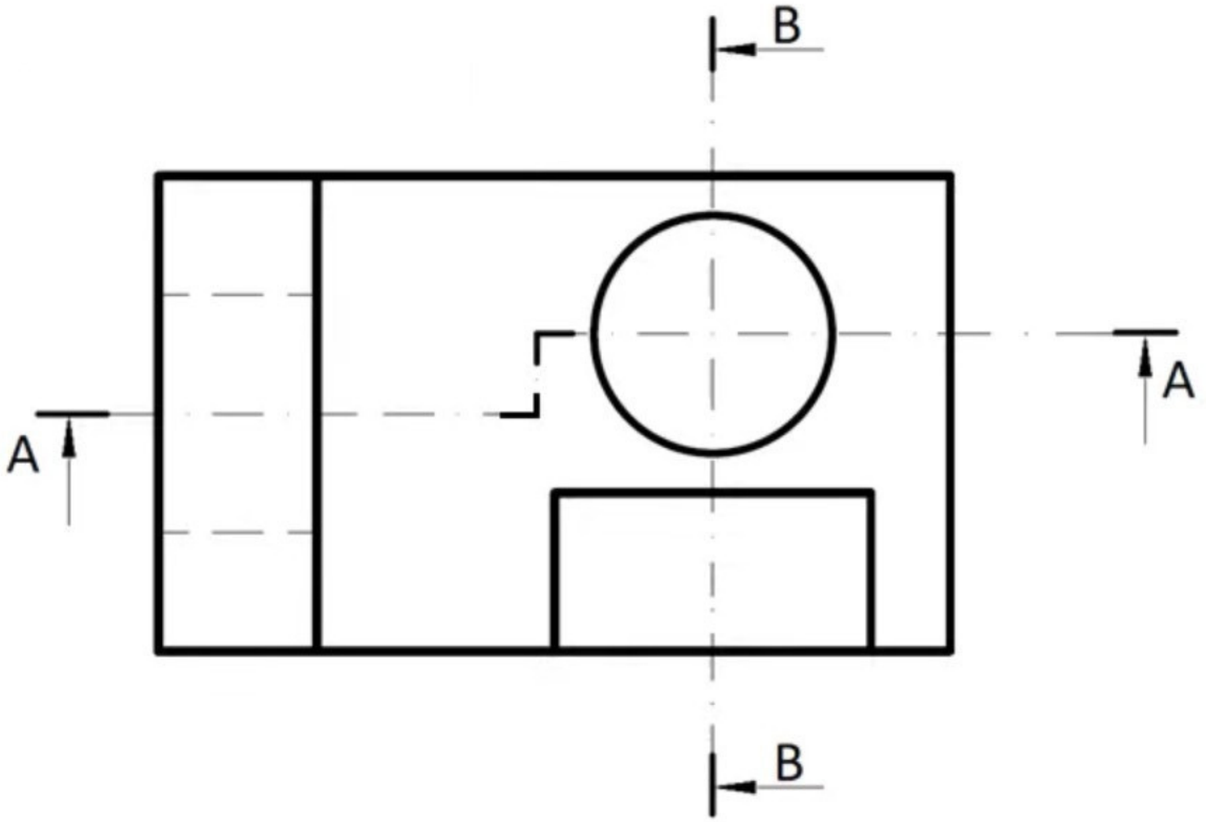


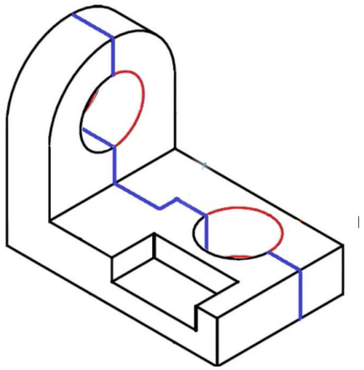


ARESTAS QUE INTERCEDEM
O PLANO DE CORTE

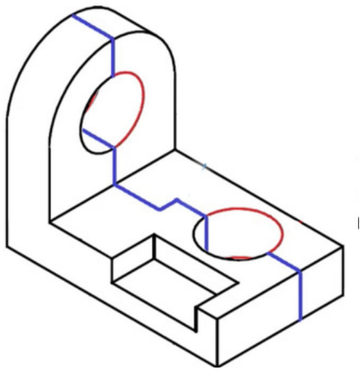
ARESTAS VISÍVEIS QUE NÃO
INTERCEDEM O PLANO DE CORTE

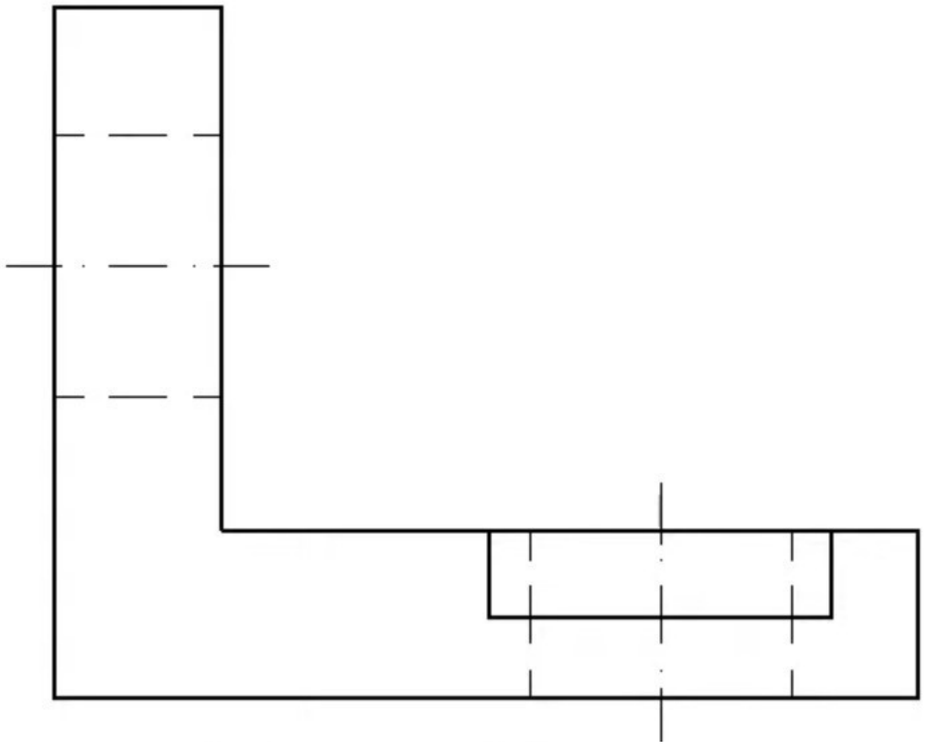
1- EXECUÇÃO DO CORTE AA
VISTA SUPERIOR DA PEÇA





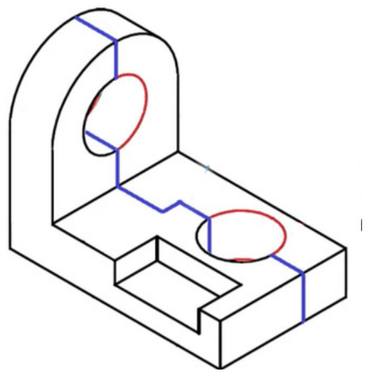
PASSO 1- VISUALIZAR A VISTA FRONTAL DA PEÇA

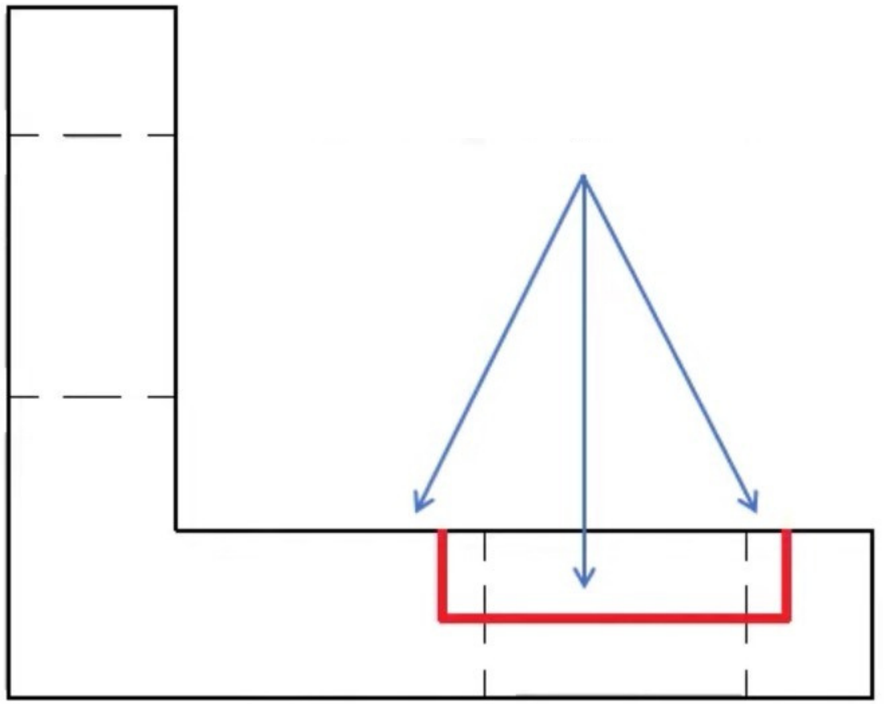




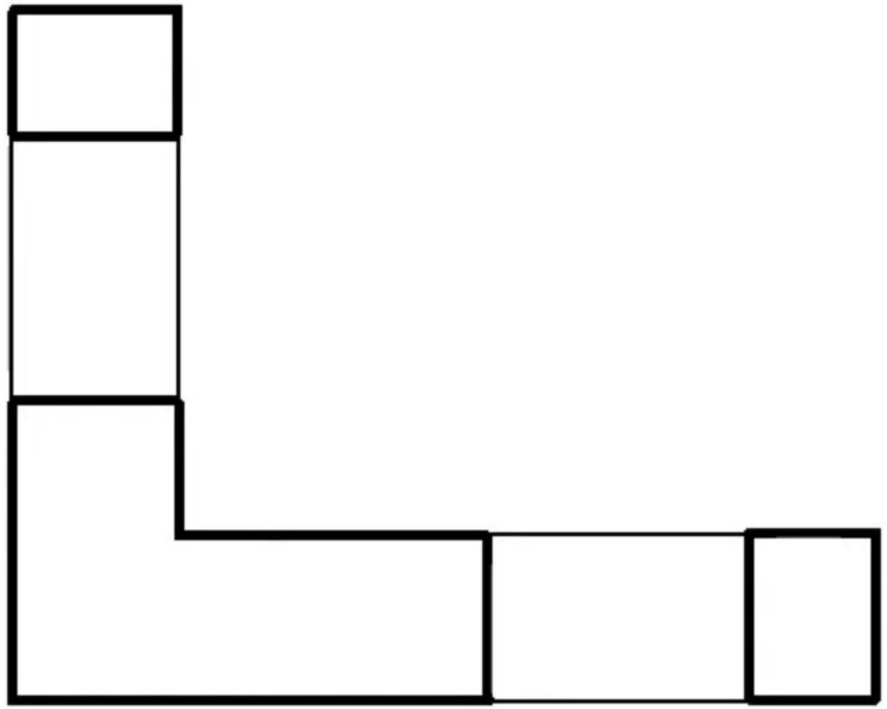
VISTA FRONTAL DA PEÇA

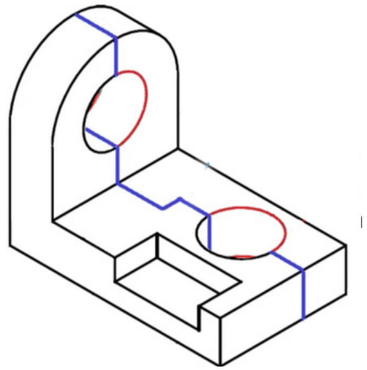
PASSO 2- REMOVER OS DETALHES DA PEÇA QUE SE LOCALIZAM À FRENTE DO PLANO DE CORTE



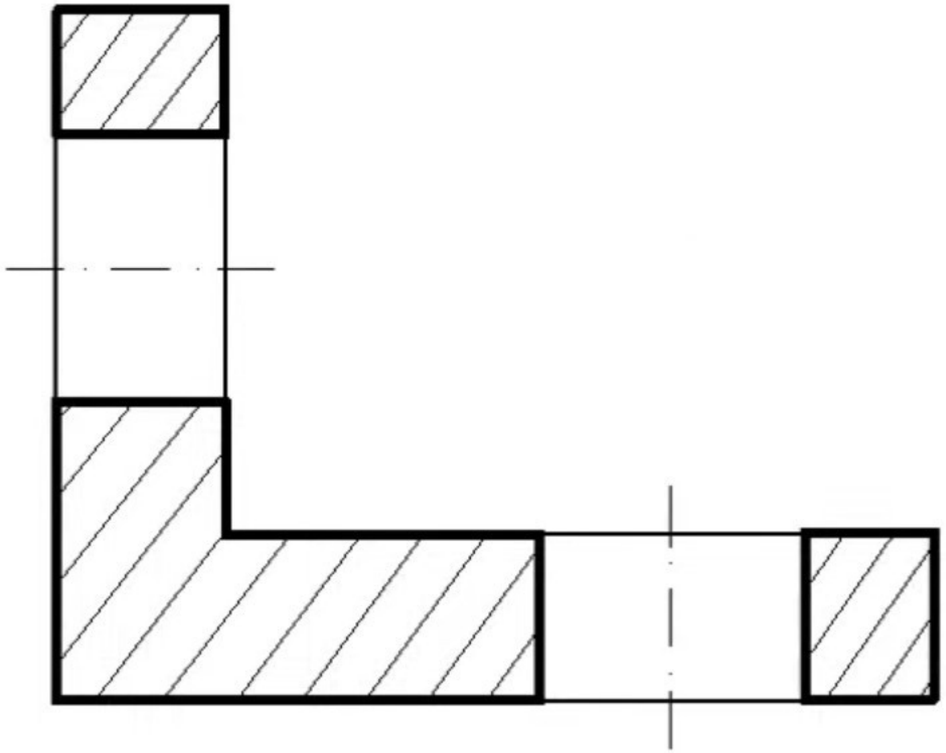


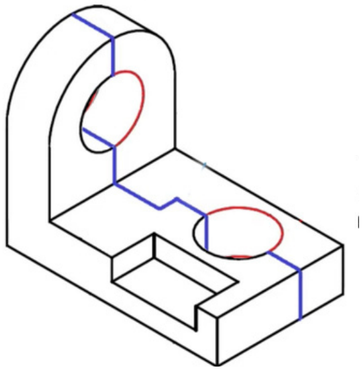
PASSO 3- IDENTIFICAR AS ARESTAS QUE INTERCEDEM O PLANO DE CORTE E AUMENTAR SUA ESPESSURA

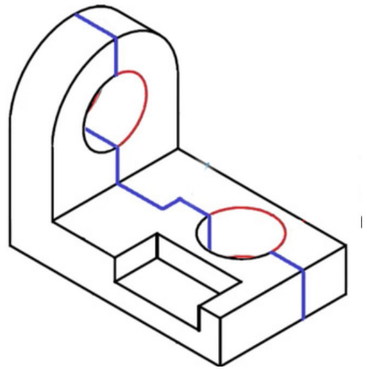


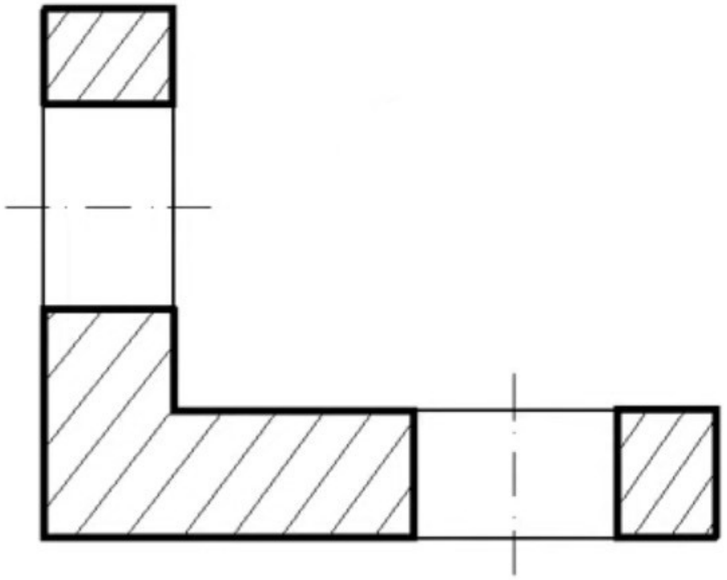


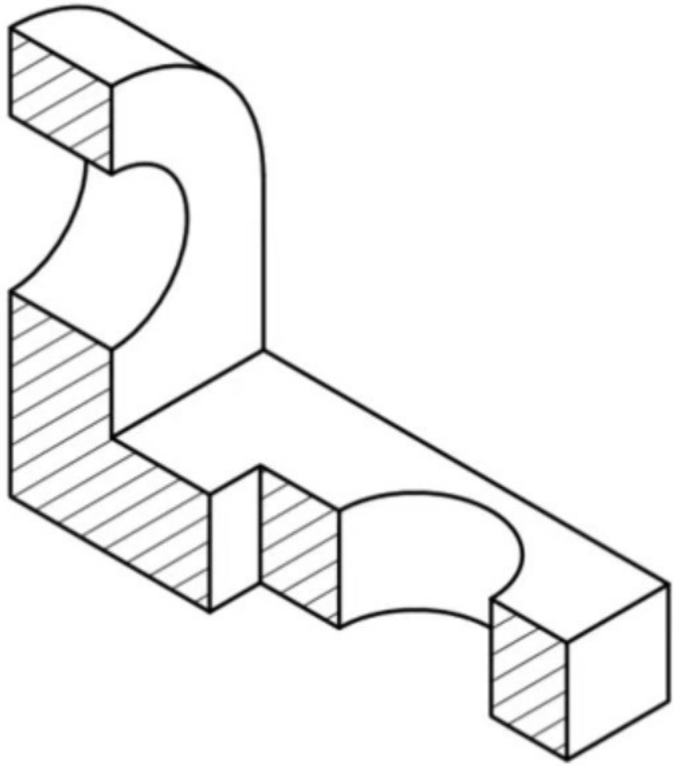
PASSO 4- EXECUTAR AS HACHURAS E DESENHAR LINHAS DE CENTRO



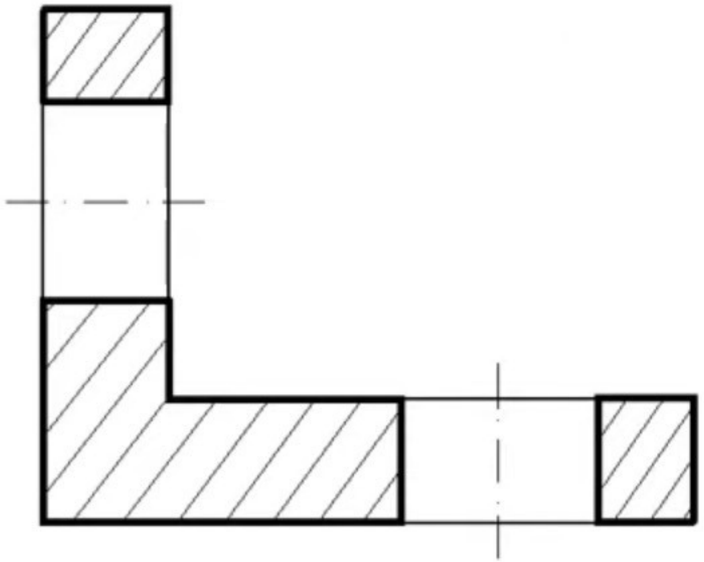




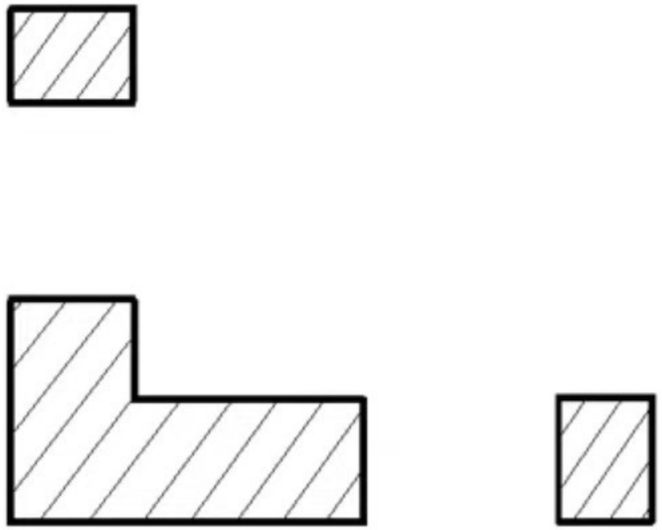


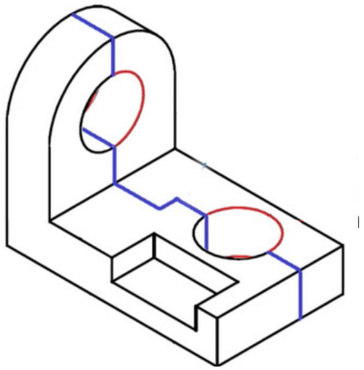


CORTE



SEÇÃO



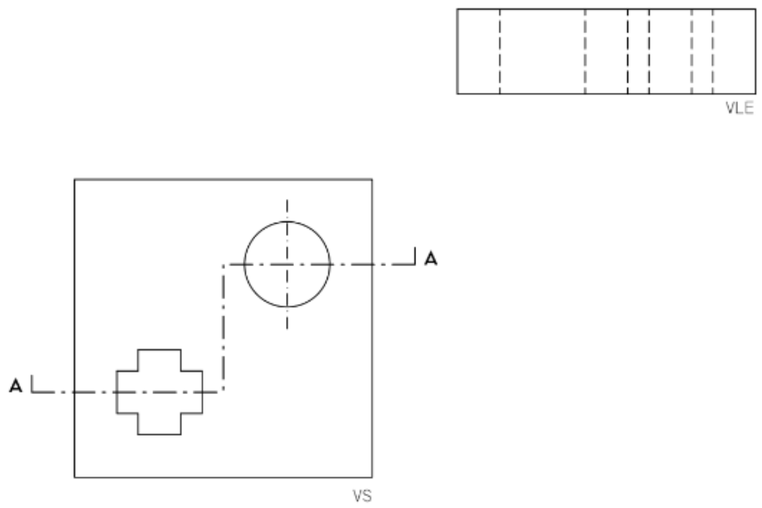


ATIVIDADES

G_1 CORTE COM DESVIO

Desenhe no quadrante livre o corte AA da figura demonstrada. Mantenha as linhas de construção em sua natureza secundária.

Hierarquia: 1. Arestas do corte e hachuras 2. Demais arestas da peça

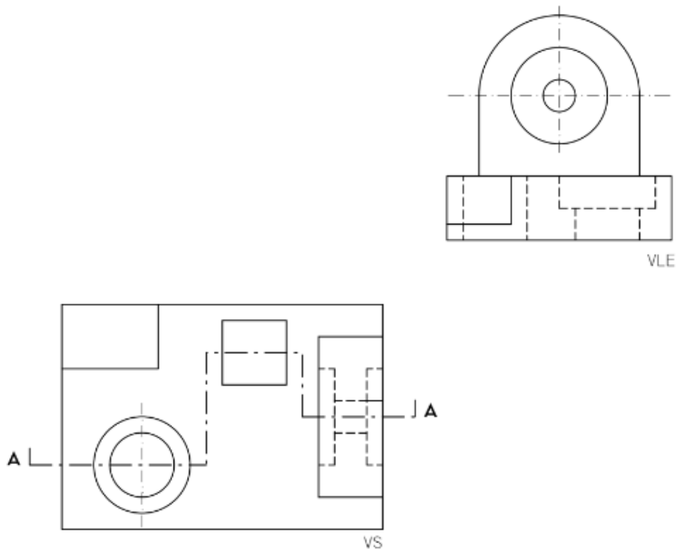


NOME _____ Nº USP _____

G_2 CORTE COM DESVIO

Desenhe no quadrante livre o corte AA da figura demonstrada. Mantenha as linhas de construção em sua natureza secundária.

Hierarquia: 1. Arestas do corte e hachuras 2. Demais arestas da peça



NOME _____ Nº USP _____