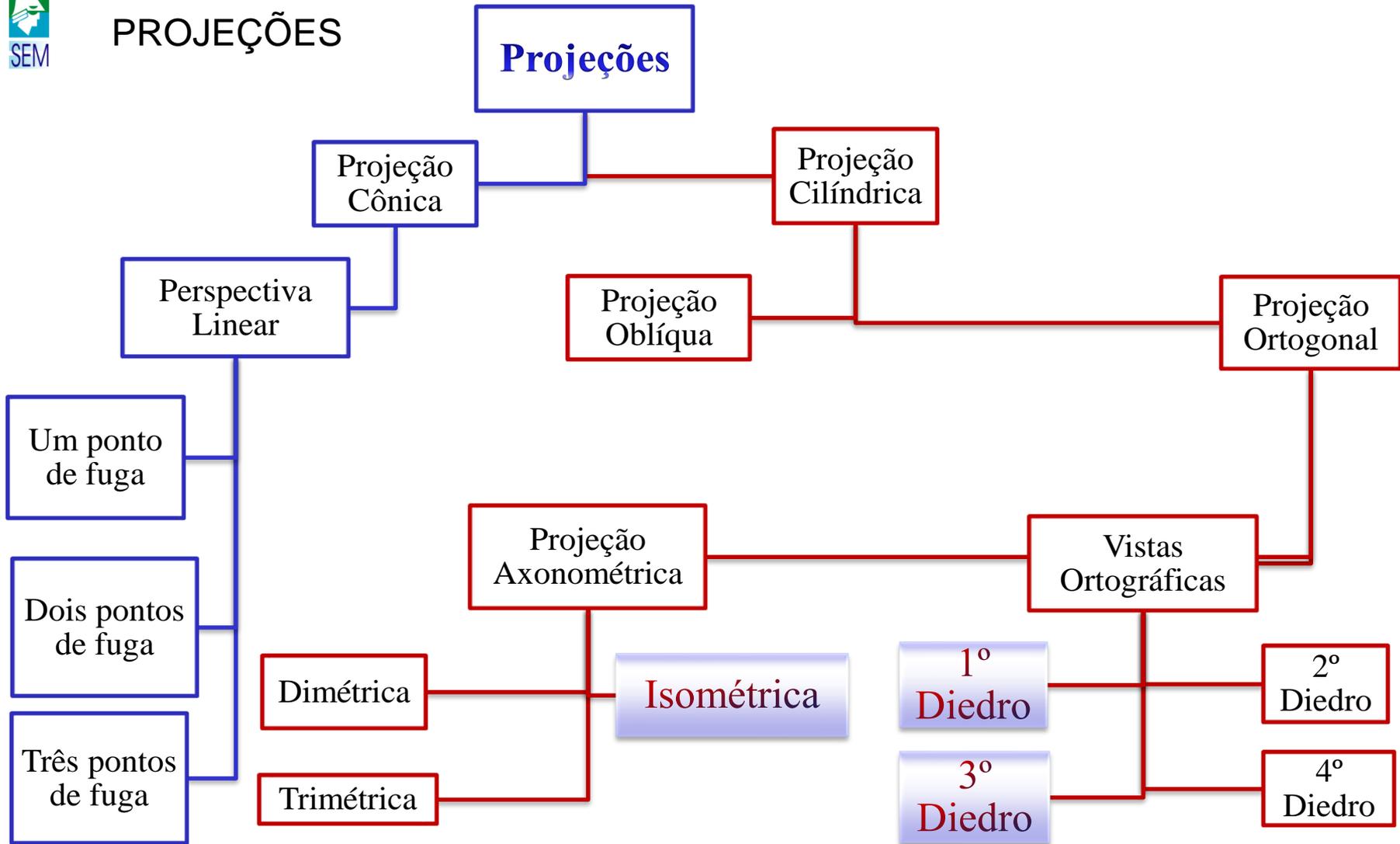


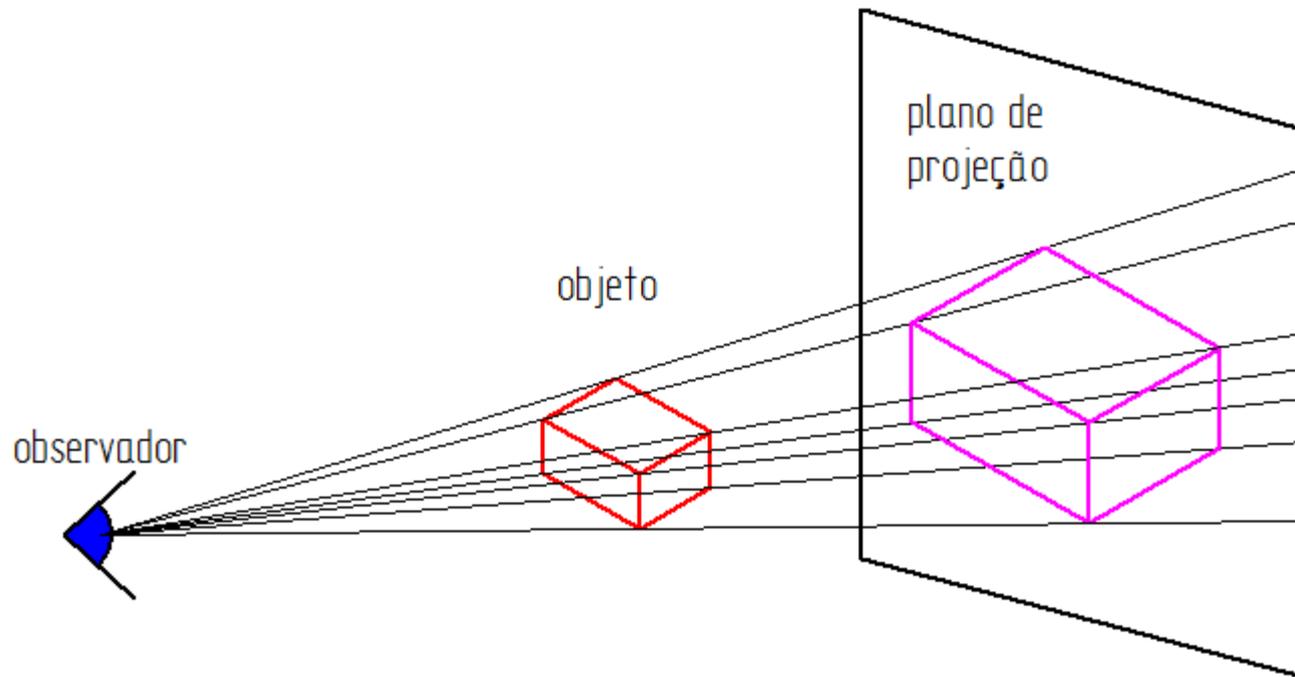
DESENHO TÉCNICO MECÂNICO I

Aula 02 – Projeção, vistas, diedros

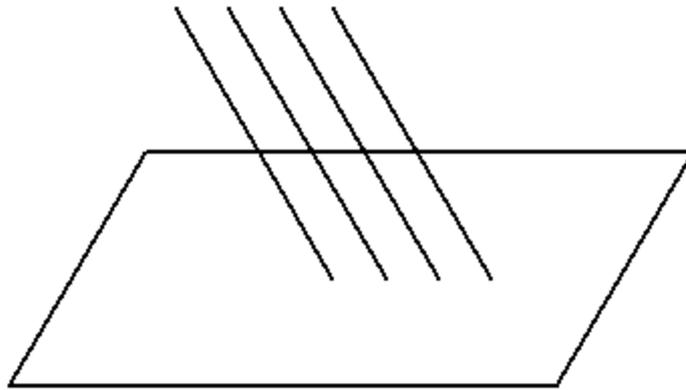
PROJEÇÕES



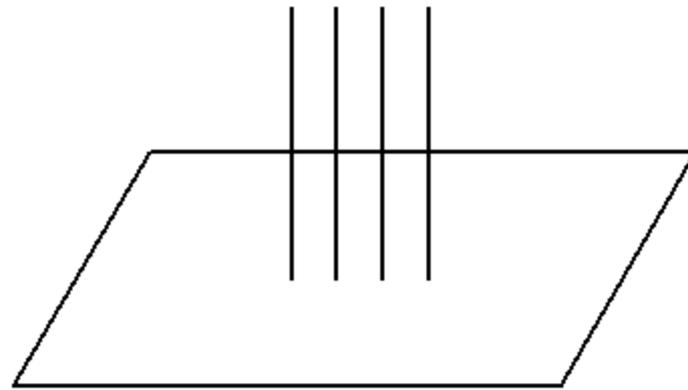
PROJEÇÕES – Perspectiva cônica



PROJEÇÕES – Perspectivas cilíndricas



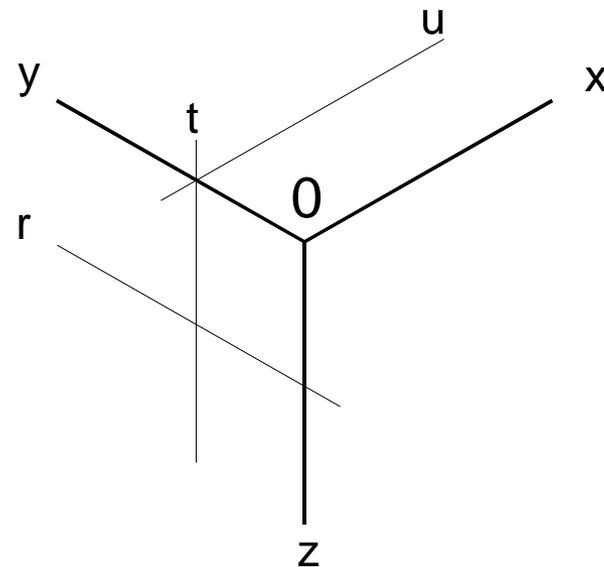
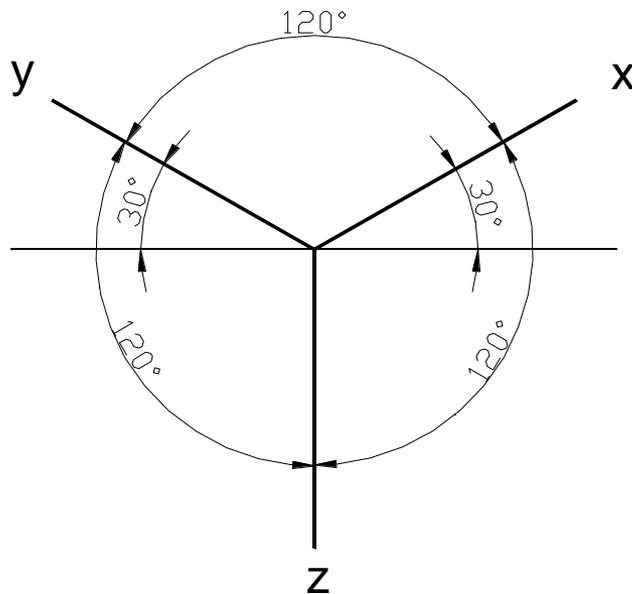
Projeção oblíqua



Projeção ortogonal

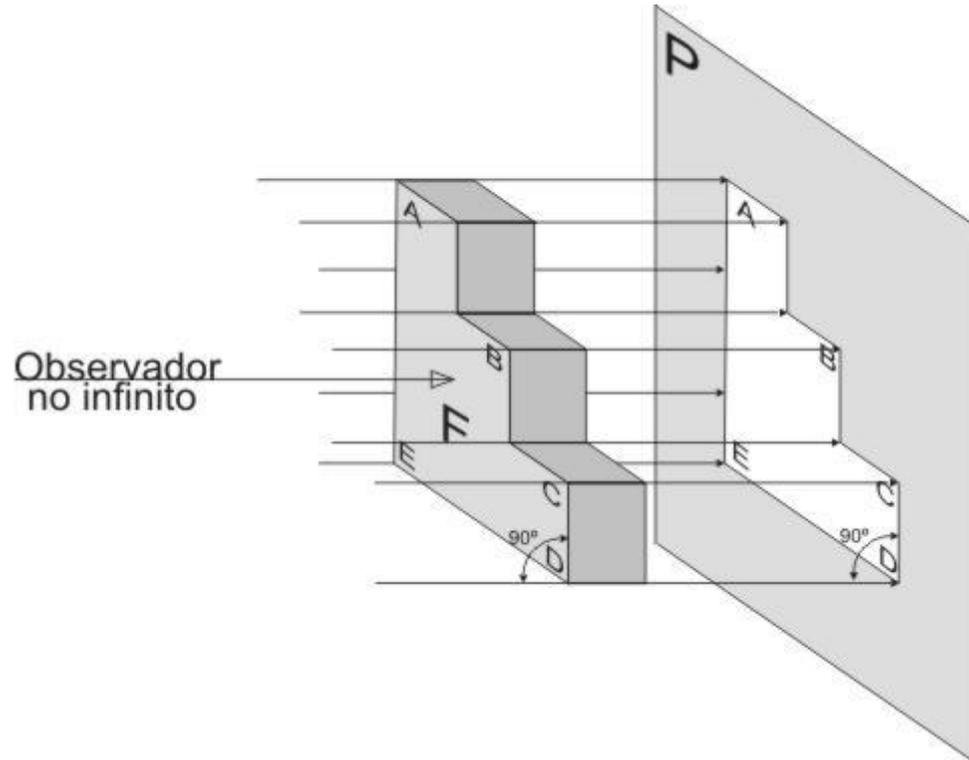
PERSPECTIVA ISOMÉTRICA (projeção isométrica)

Em perspectiva isométrica os três eixos (x,y,z) formam entre si ângulos de 120° . Os eixos oblíquos formam com a horizontal ângulos de 30° . Toda linha paralela aos eixos isométricos são chamadas de linhas isométricas.



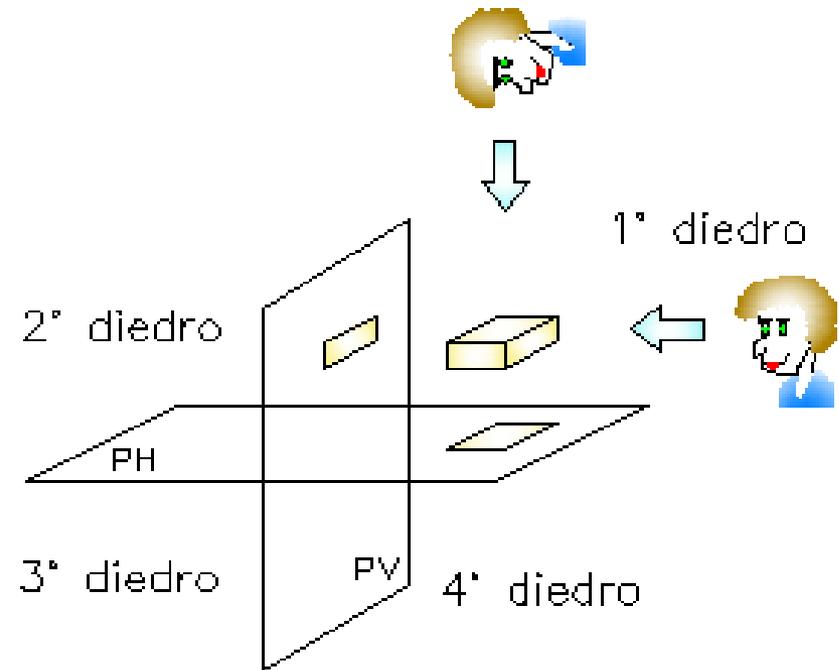
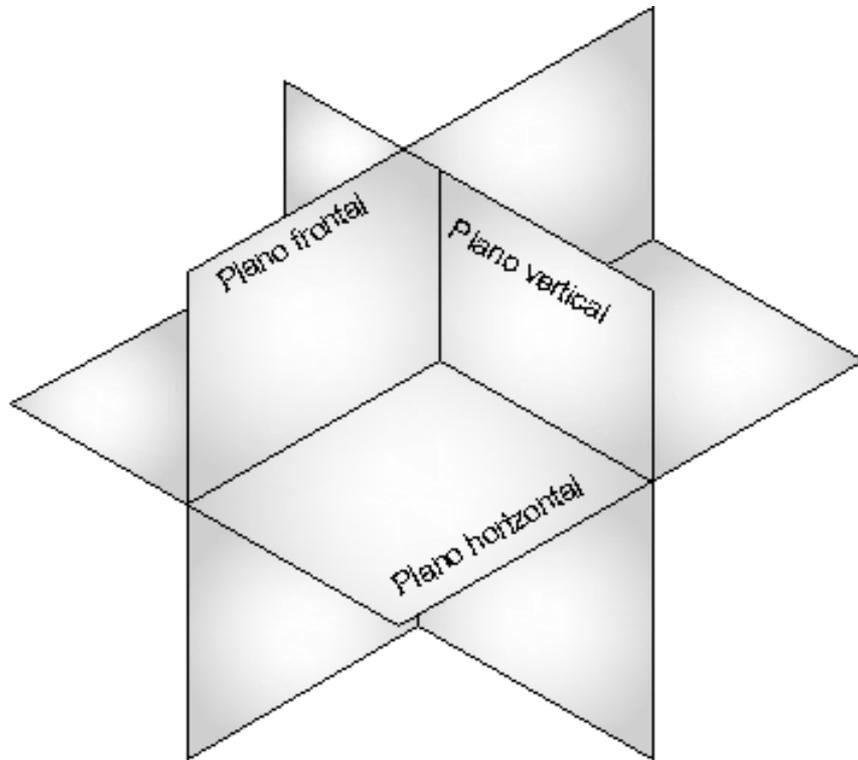
PROJEÇÕES ORTOGONAIS

Linhas projetantes paralelas entre si e perpendiculares ao plano de projeção reproduzem no plano uma imagem com o mesmo contorno e mesma grandeza do objeto. Na Projeção Ortogonal, a figura plana considerada é reproduzida em verdadeira grandeza.



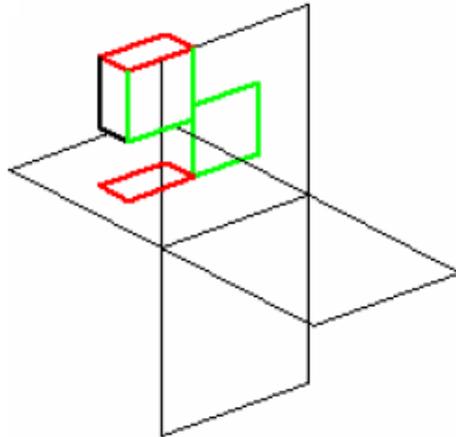
Projeção ortogonal no 1º Diedro

No Brasil, assim como na Europa, Ásia e em outros países usa-se da projeção no primeiro diedro, e o 3º diedro é usado nos EUA e no Canadá.

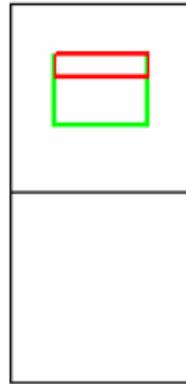


Diedros – projeção de vistas

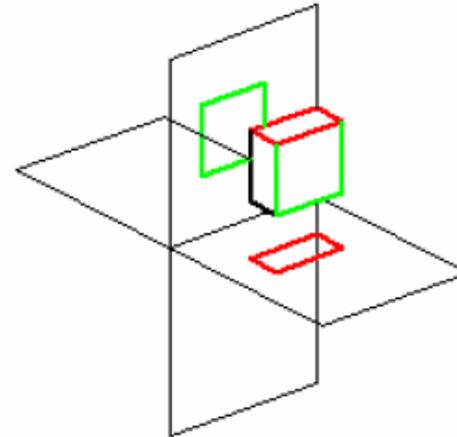
Segundo diedro



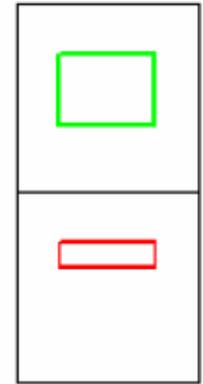
Épura



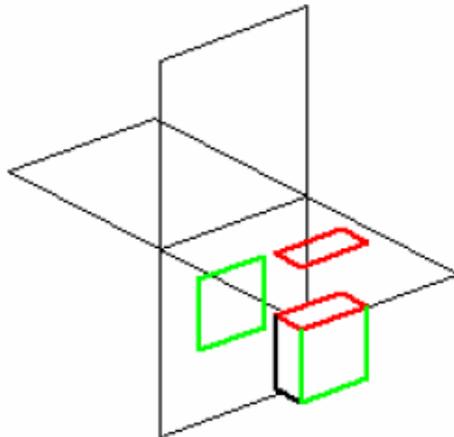
Primeiro diedro



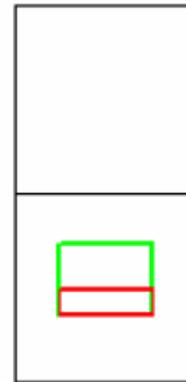
Épura



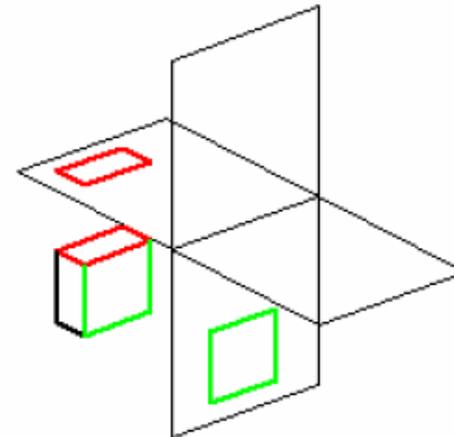
Quarto diedro



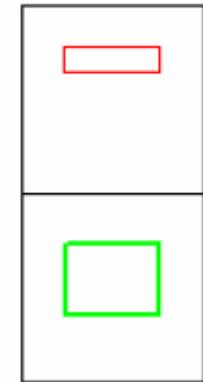
Épura



Terceiro diedro



Épura



Símbolos de Projeção ortogonal no 1º Diedro e 3º Diedro

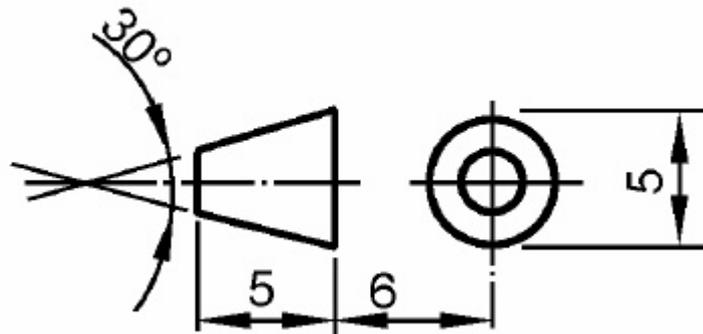
Na legenda deve estar incluída a representação do diedro usado no desenho:



1º Diedro

3º Diedro

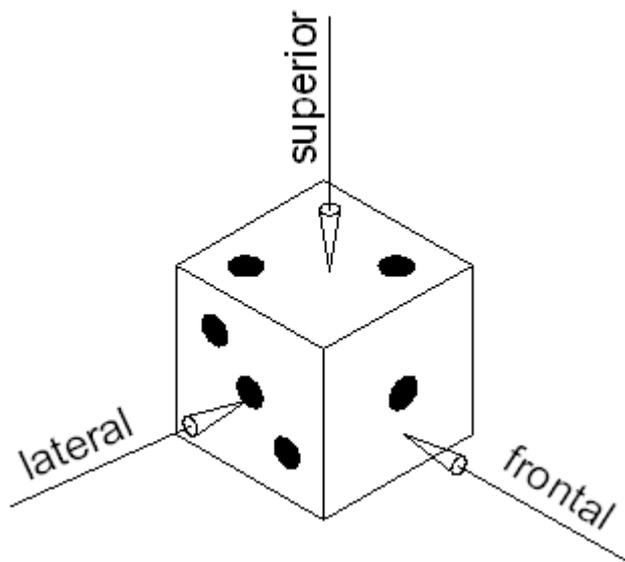
O Símbolo deve ter as seguintes dimensões:



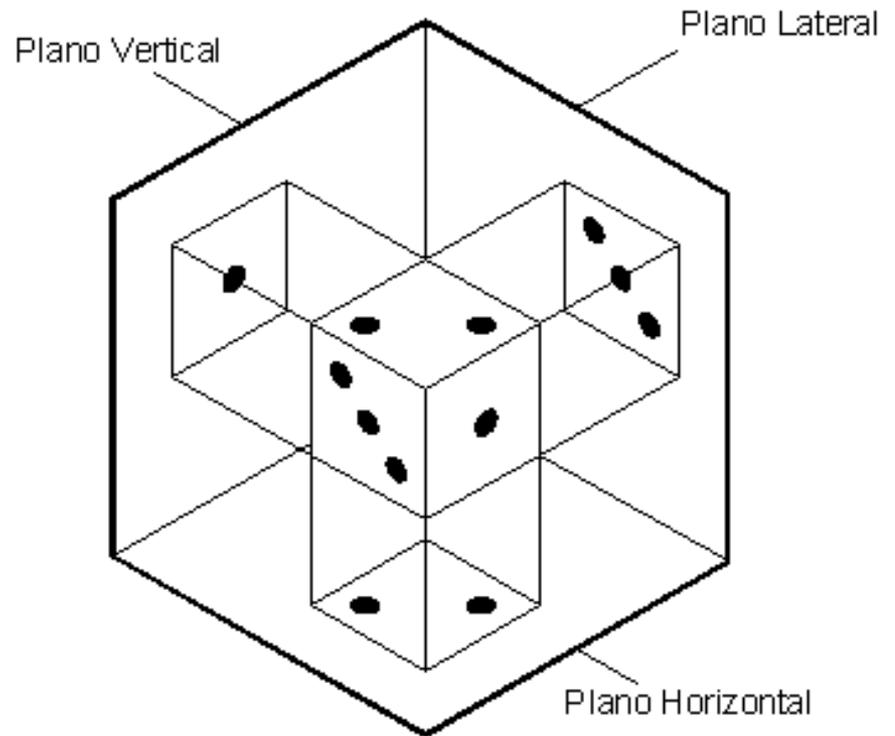
Fonte: Apostila Desenho Mecânico. Desenho com instrumentos. Convênio SENAI/São Paulo

Projeção ortogonal no 1º Diedro - procedimento

Objeto: dado

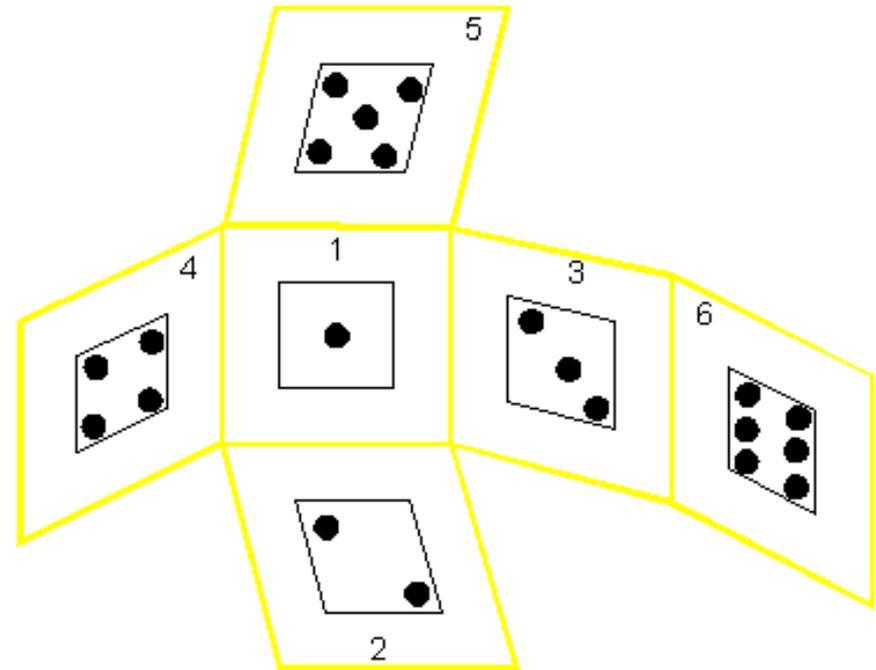
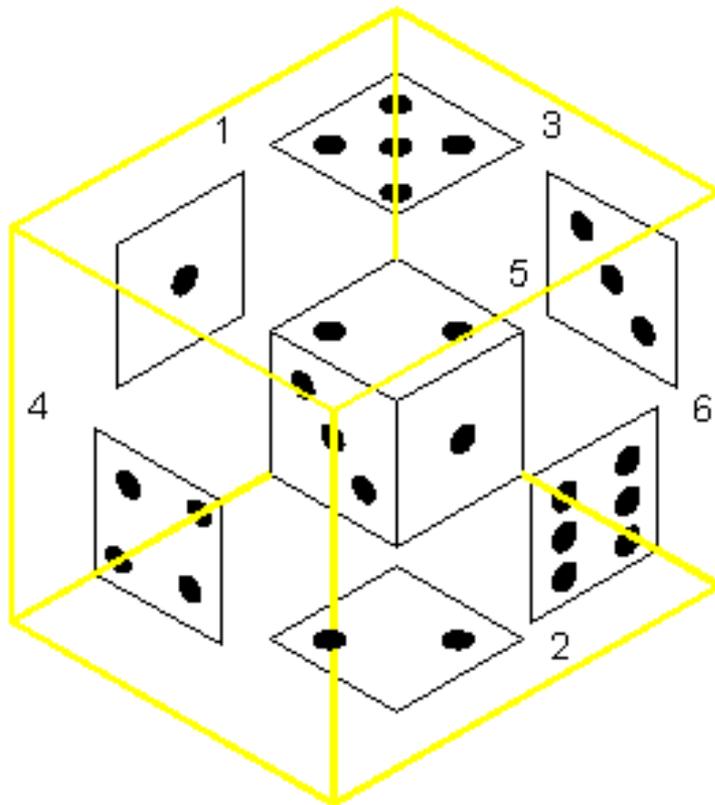


Projeção no primeiro diedro

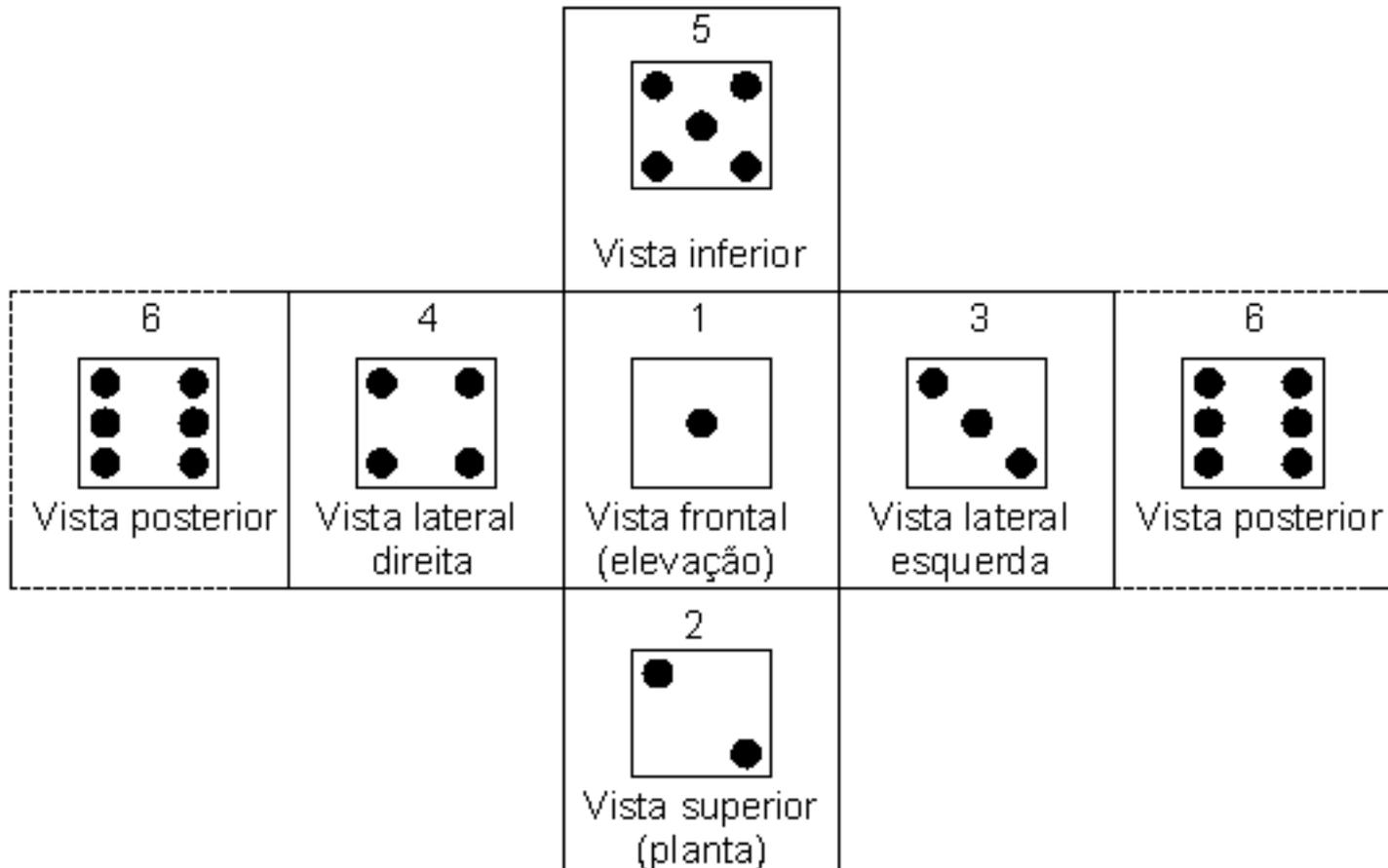


Fonte: Apostila Desenho Mecânico, v9. Projeção ortogonal. Convênio SENAI/São Paulo

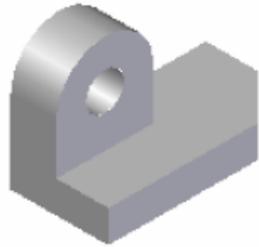
Projeção completa



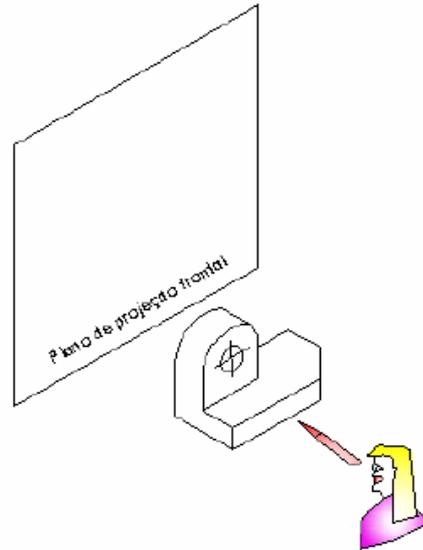
Projeção completa com o nome e posição das vistas



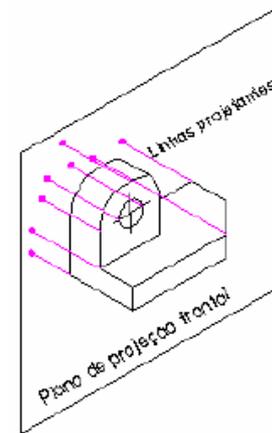
Projeção ortogonal - 1º Diedro - Vista frontal



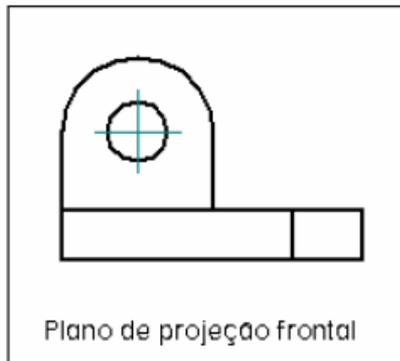
Objeto



Plano de projeção – objeto - observador



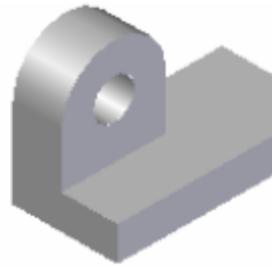
Traçam-se linhas paralelas entre si e perpendiculares ao plano de projeção.



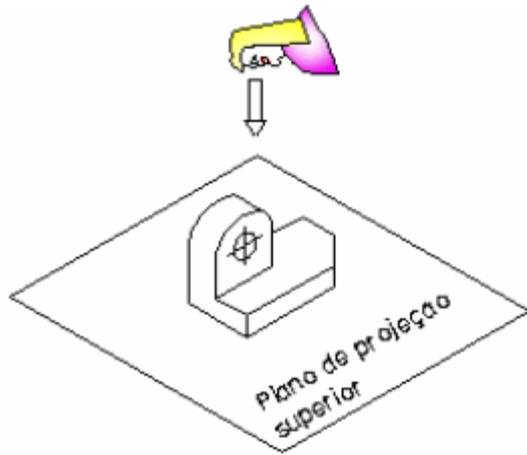
Plano de projeção frontal

Vista frontal

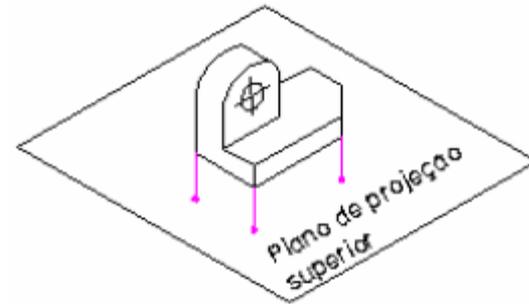
Projeção ortogonal - 1º Diedro - Vista superior



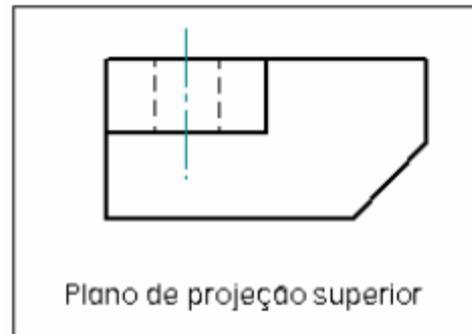
Objeto



Plano de projeção – objeto - observador

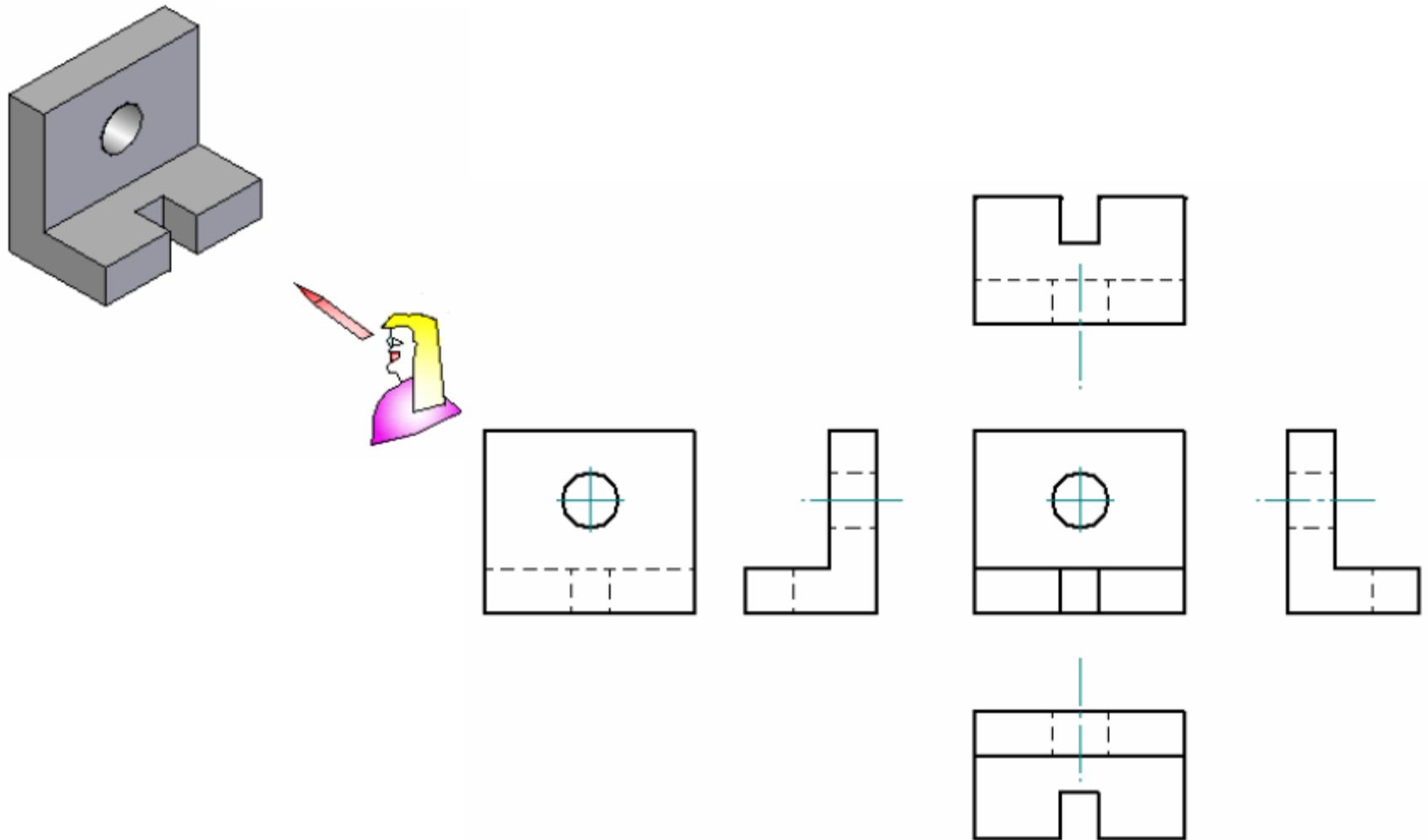


Traçam-se linhas paralelas entre si e perpendiculares ao plano de projeção.



Vista superior

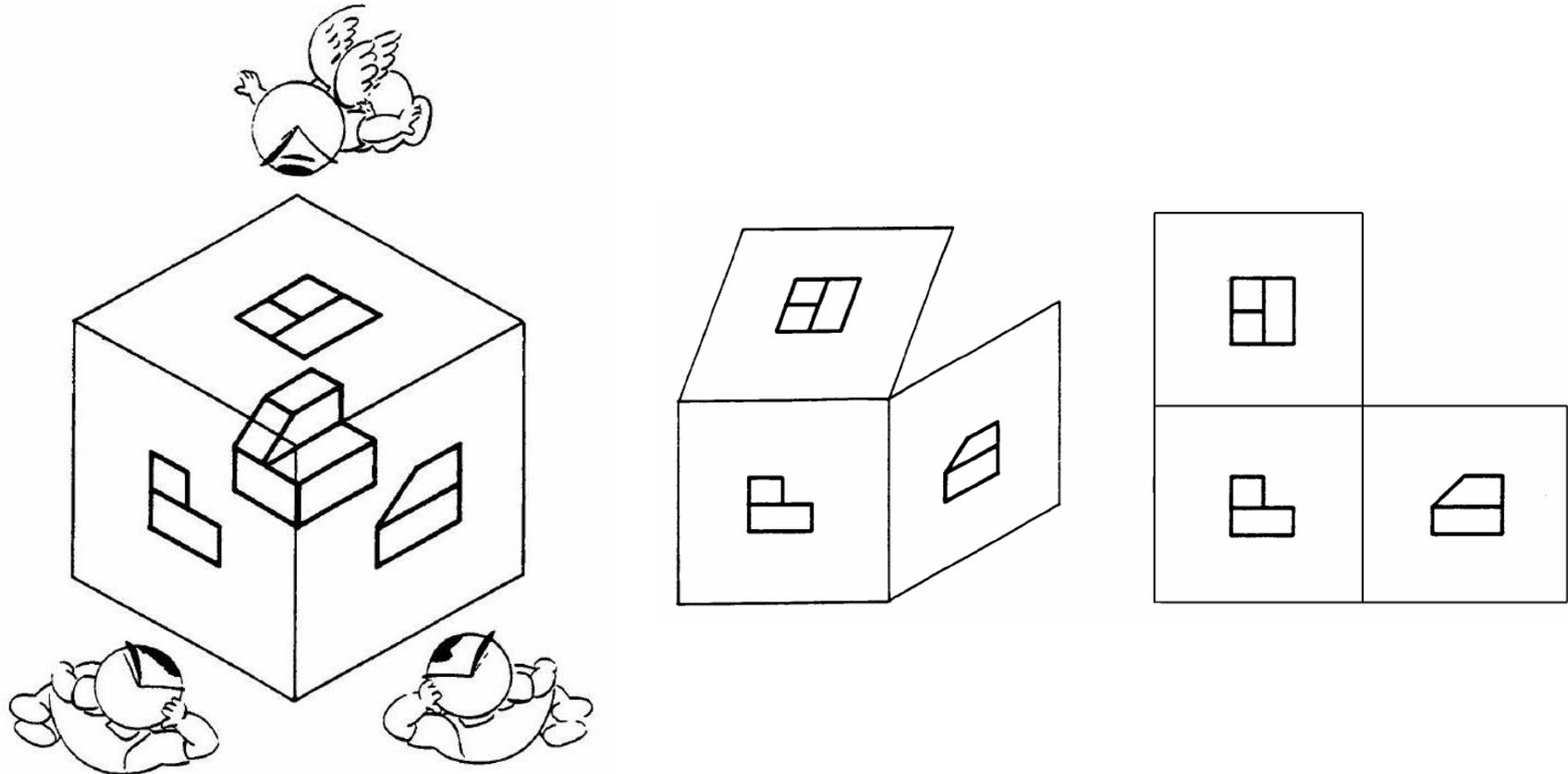
Projeção ortogonal - 1º Diedro



Projeção ortogonal no 3º Diedro - Procedimento

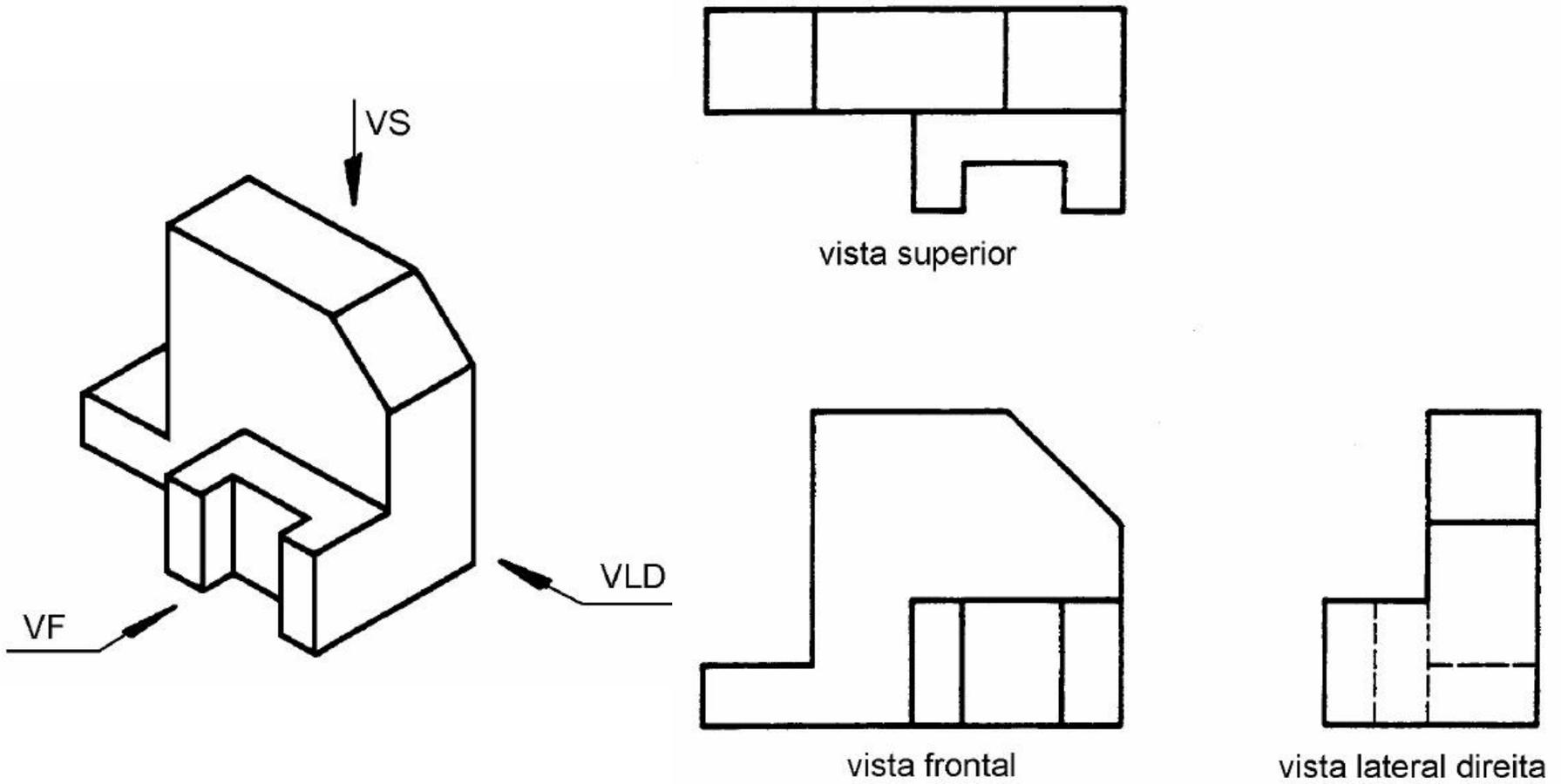
Objeto: bloco de madeira

Projeção no terceiro diedro



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

Projeção ortogonal no 3º Diedro - Exemplo

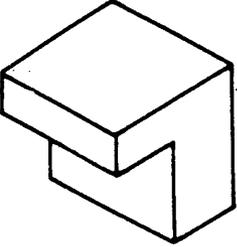
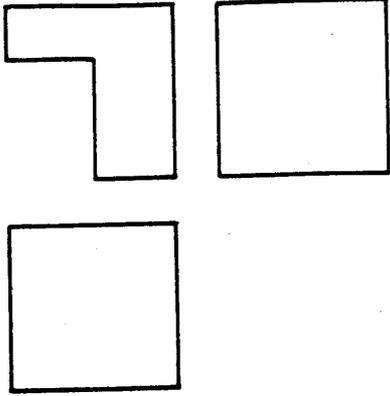
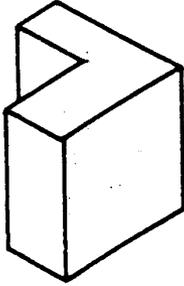
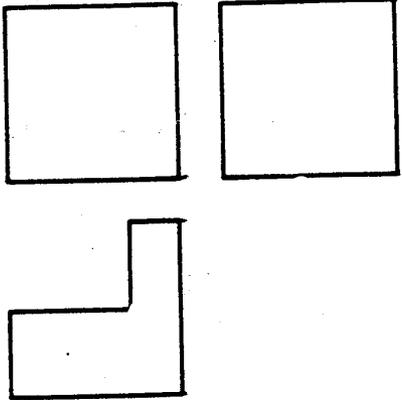
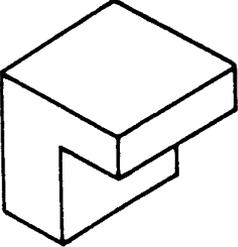
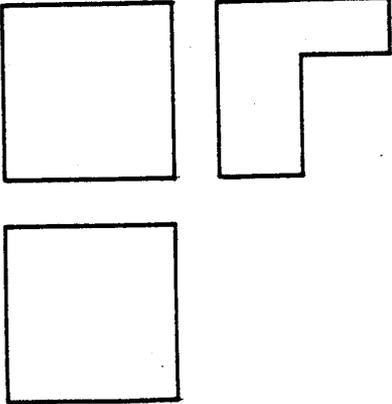
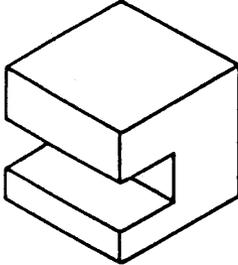
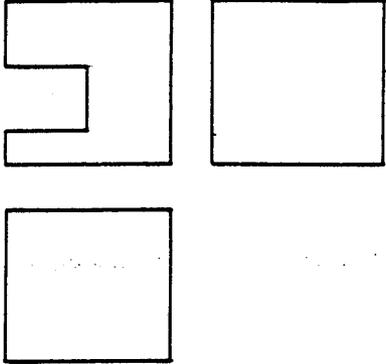


Fonte: Apostila Desenho Mecânico, v9. Projeção ortogonal. Convênio SENAI/São Paulo

Exercício 2.03 – COMPLETE AS PROJEÇÕES

Nome: _____

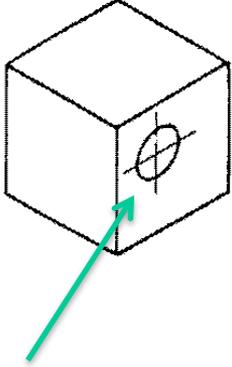
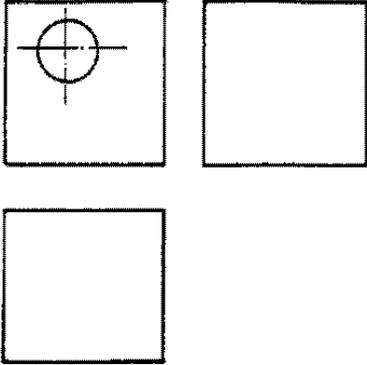
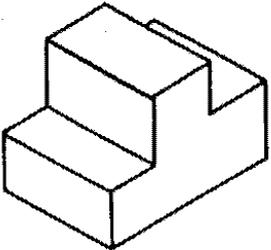
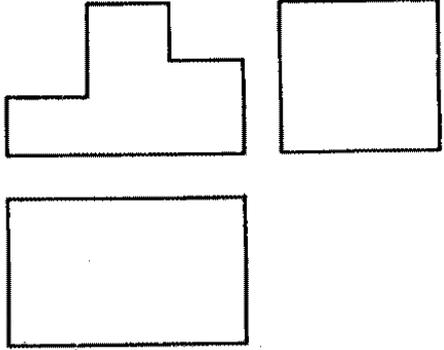
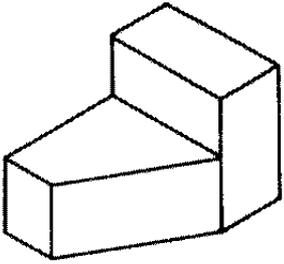
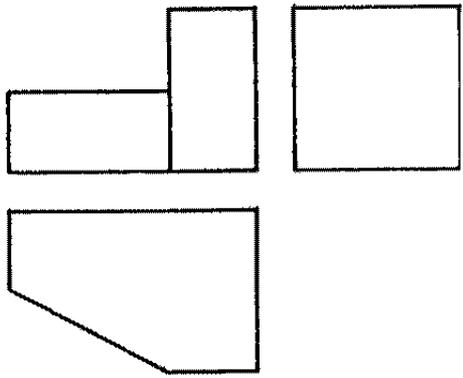
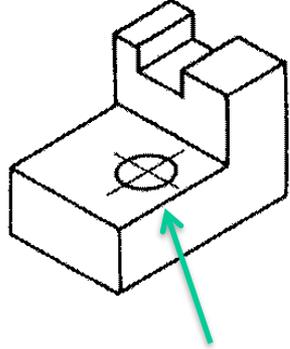
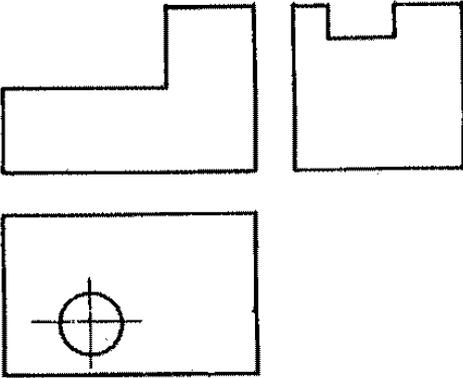
Nº _____ Turma _____

Exercício 2.04 – COMPLETE AS PROJEÇÕES

Nome: _____

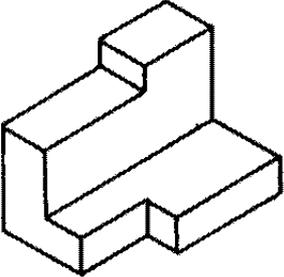
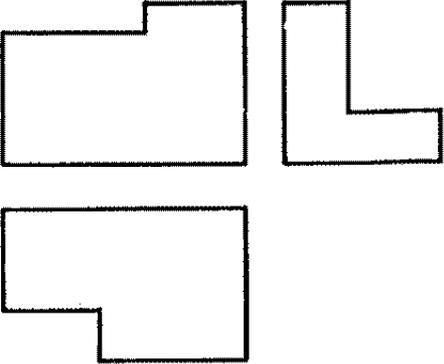
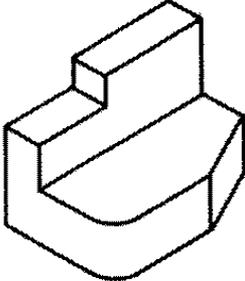
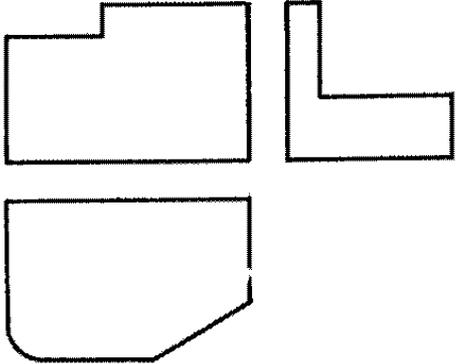
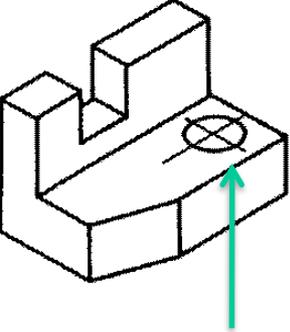
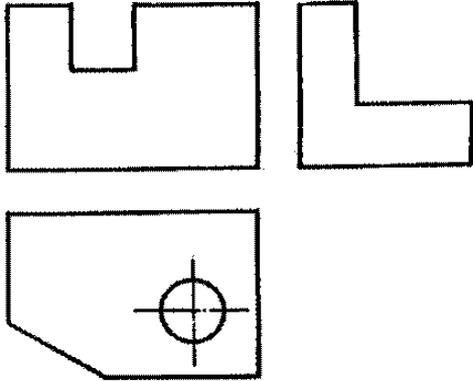
Nº _____ Turma _____

 <p>Furo Passante</p> 	 
 	 <p>Furo Passante</p> 

Exercício 2.05 – COMPLETE AS PROJEÇÕES

Nome: _____

Nº _____ Turma _____

 	 
 <p>Furo Passante</p> 	

Exercício 2.06 – DESENHE A VISTA QUE FALTA

Nome: _____

Nº _____ Turma _____

Exercício 2.07 – Desenhe na perspectiva isométrica as letras correspondentes.

Nome: _____

Nº _____ Turma _____

Exercício 2.08 – Desenhe nas vistas as letras correspondentes às da perspectiva isométrica.

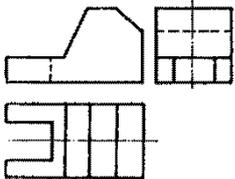
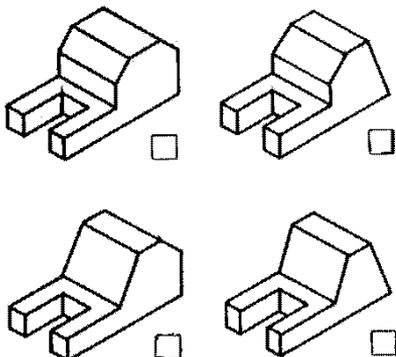
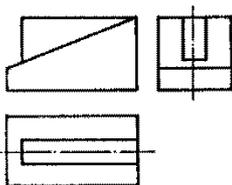
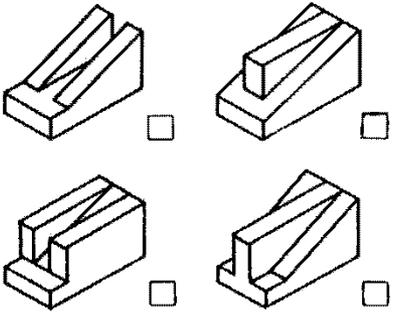
Nome: _____

Nº _____ Turma _____

Exercício 2.09 – Desenhe nas vistas as letras correspondentes às da perspectiva isométrica.

Nome: _____

Nº _____ Turma _____

Exercício 2.10 – Selecione a correta perspectiva isométrica.

Nome: _____

Nº _____ Turma _____

Exercício 2.11 – Assinale os números correspondentes.

Nome: _____

Nº _____ Turma _____

Exercício 2.12 – Assinale os números correspondentes.

Nome: _____

Nº _____ Turma _____

<p style="text-align: center;">1</p> <p style="text-align: center;">2</p>	<p style="text-align: center;">3</p> <p style="text-align: center;">4</p>
<p style="text-align: center;">5</p> <p style="text-align: center;">6</p>	<p style="text-align: center;">7</p> <p style="text-align: center;">8</p>