

Geometria Descritiva e Conceptual

20241293

Afonso Lopes Sampaio



UNIVERSIDADE
DE LISBOA



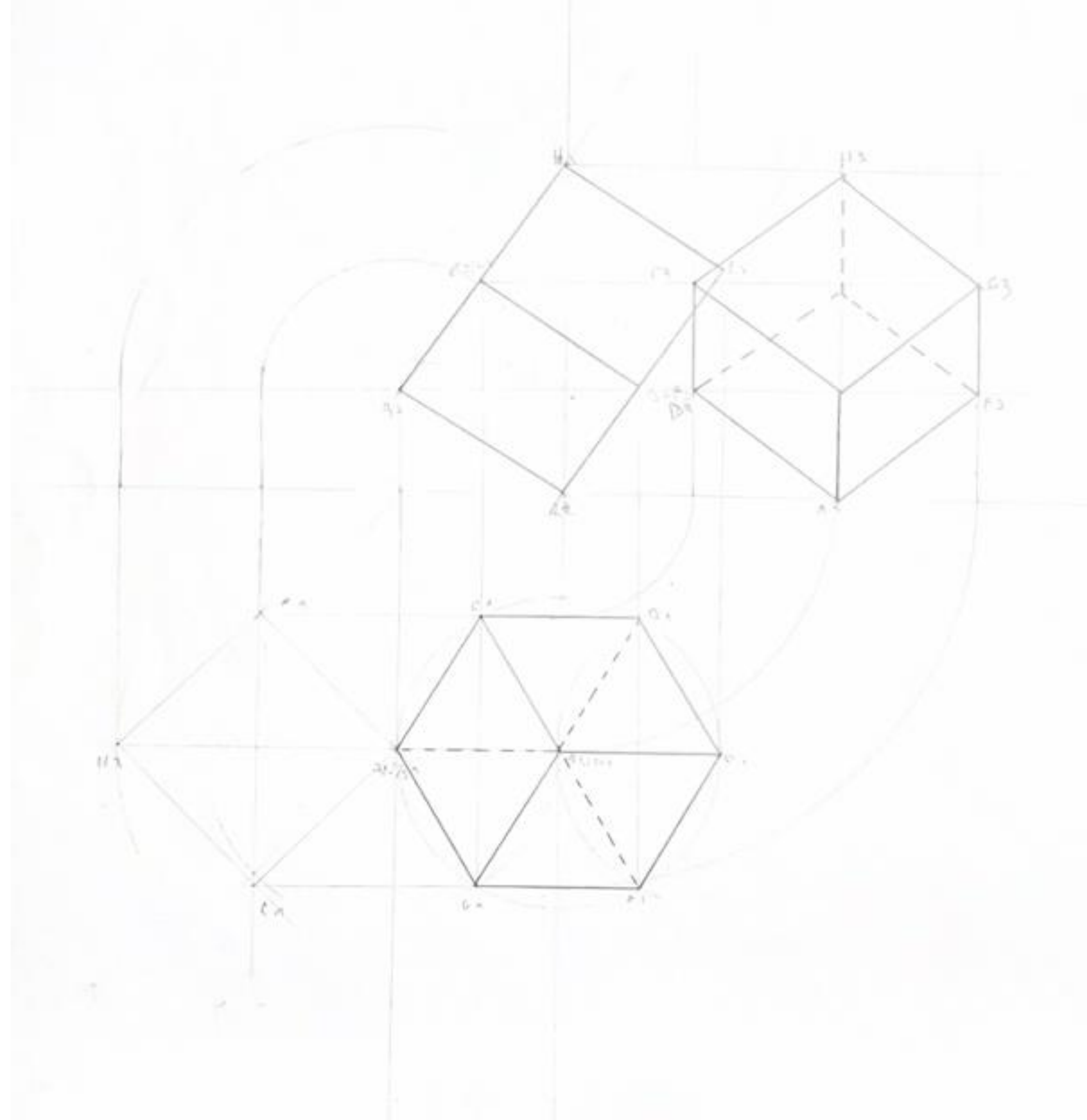
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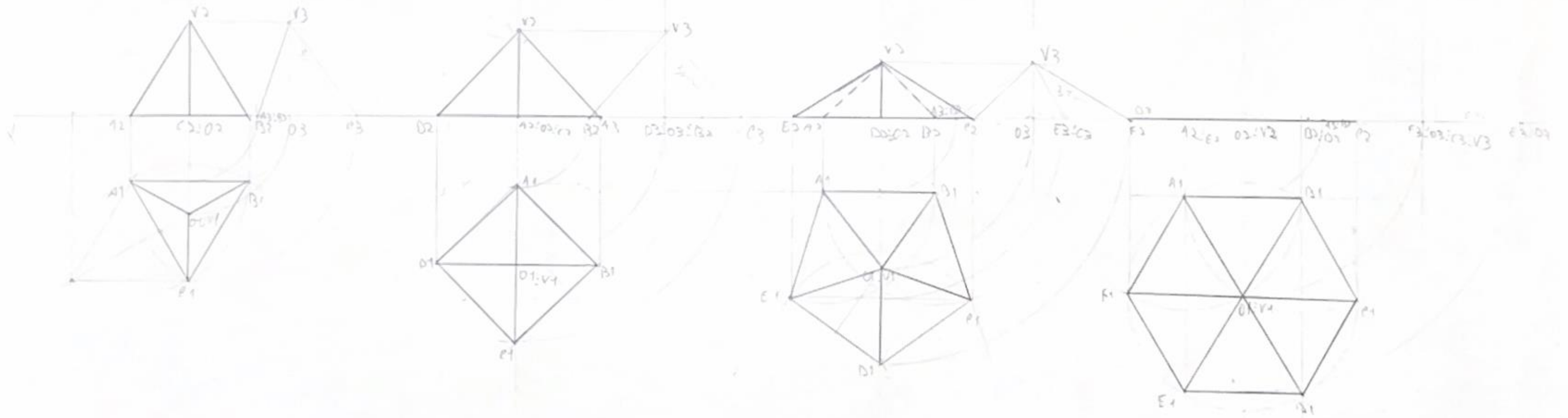
Mestrado Integrado em Arquitectura
Ano Lectivo 2024-2025 1º Semestre
Docente - Nuno Alão 1º Ano

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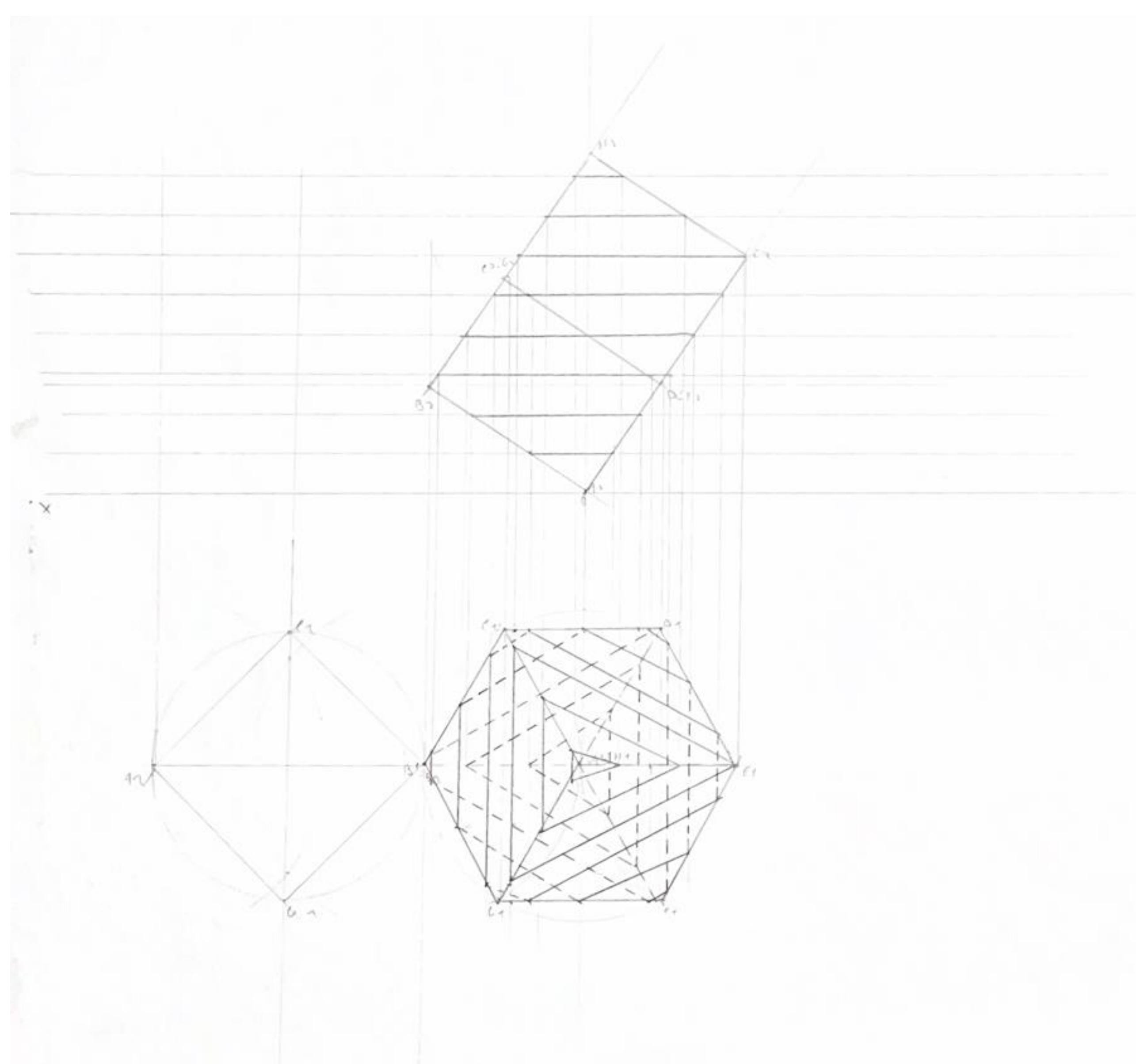
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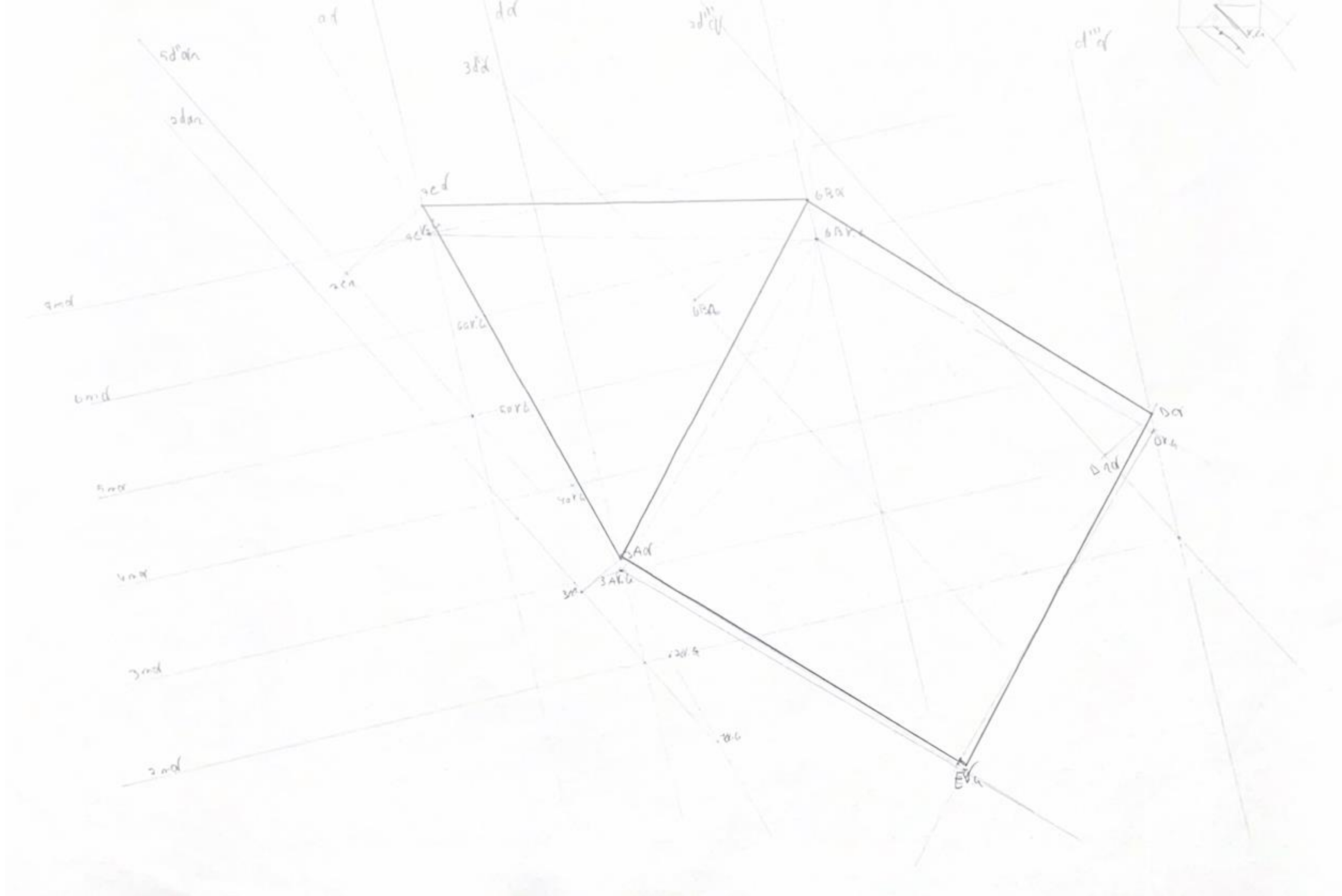
Aula.1, e exerc. 1.1 – Projeções de um cubo



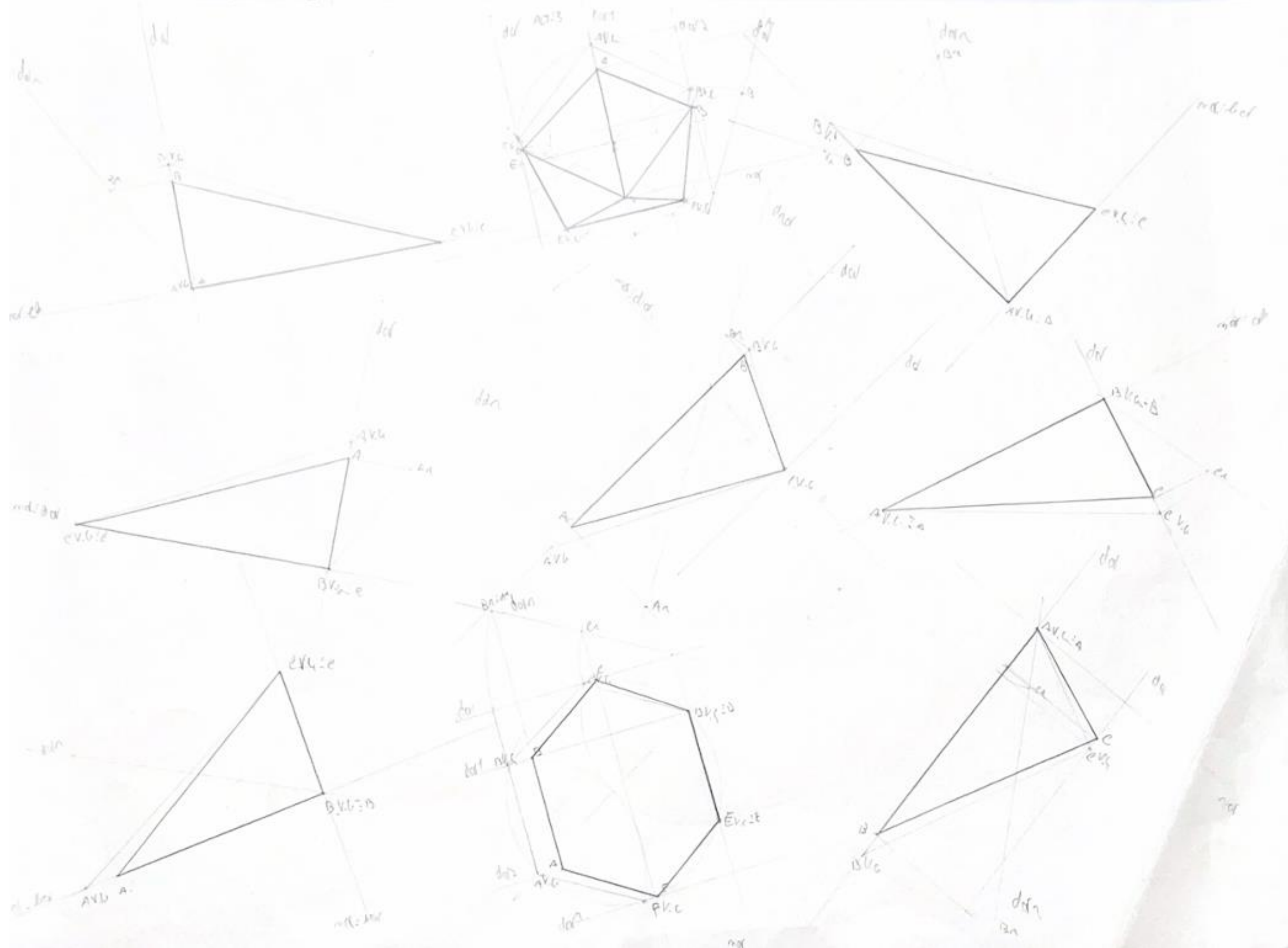
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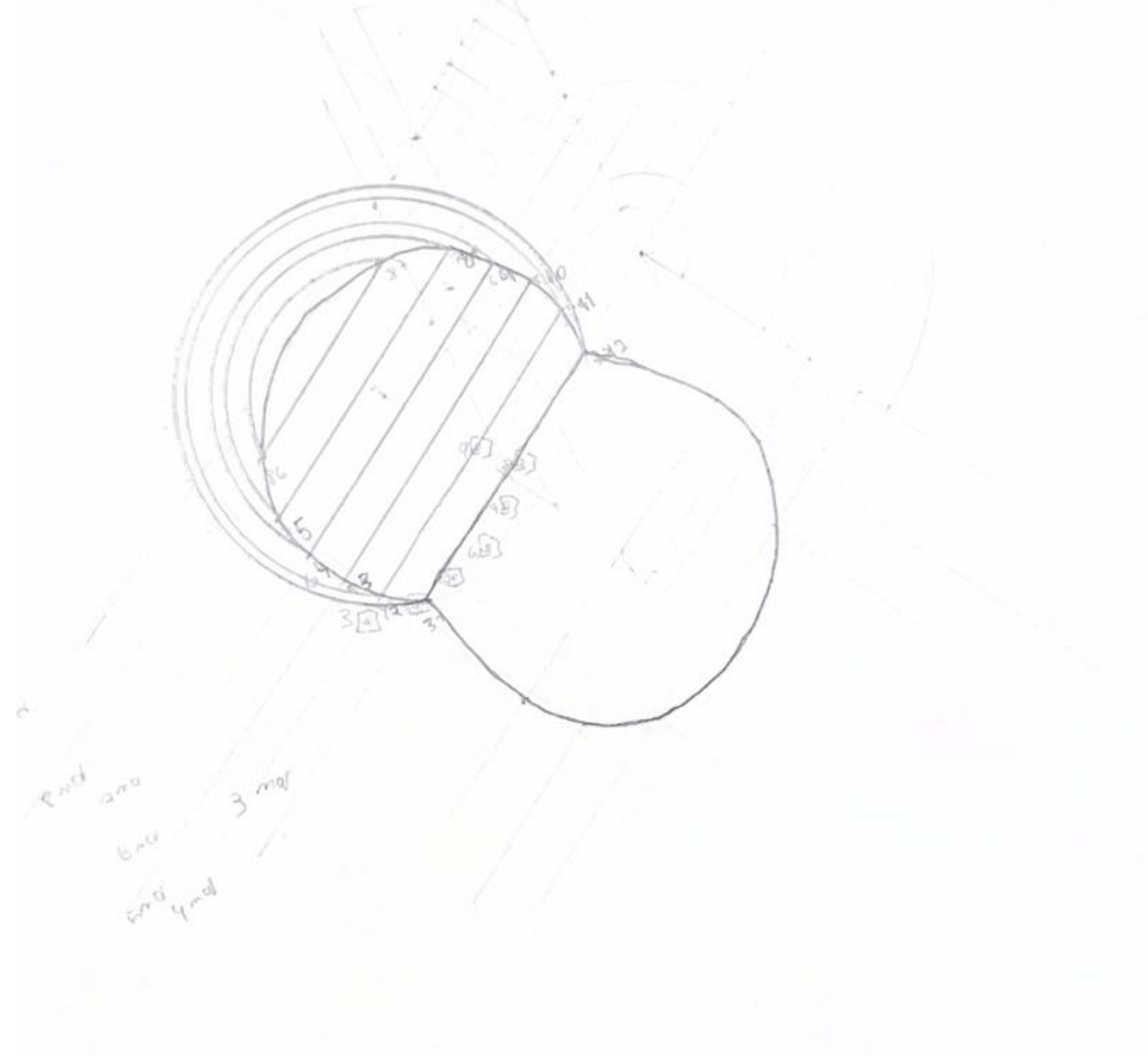
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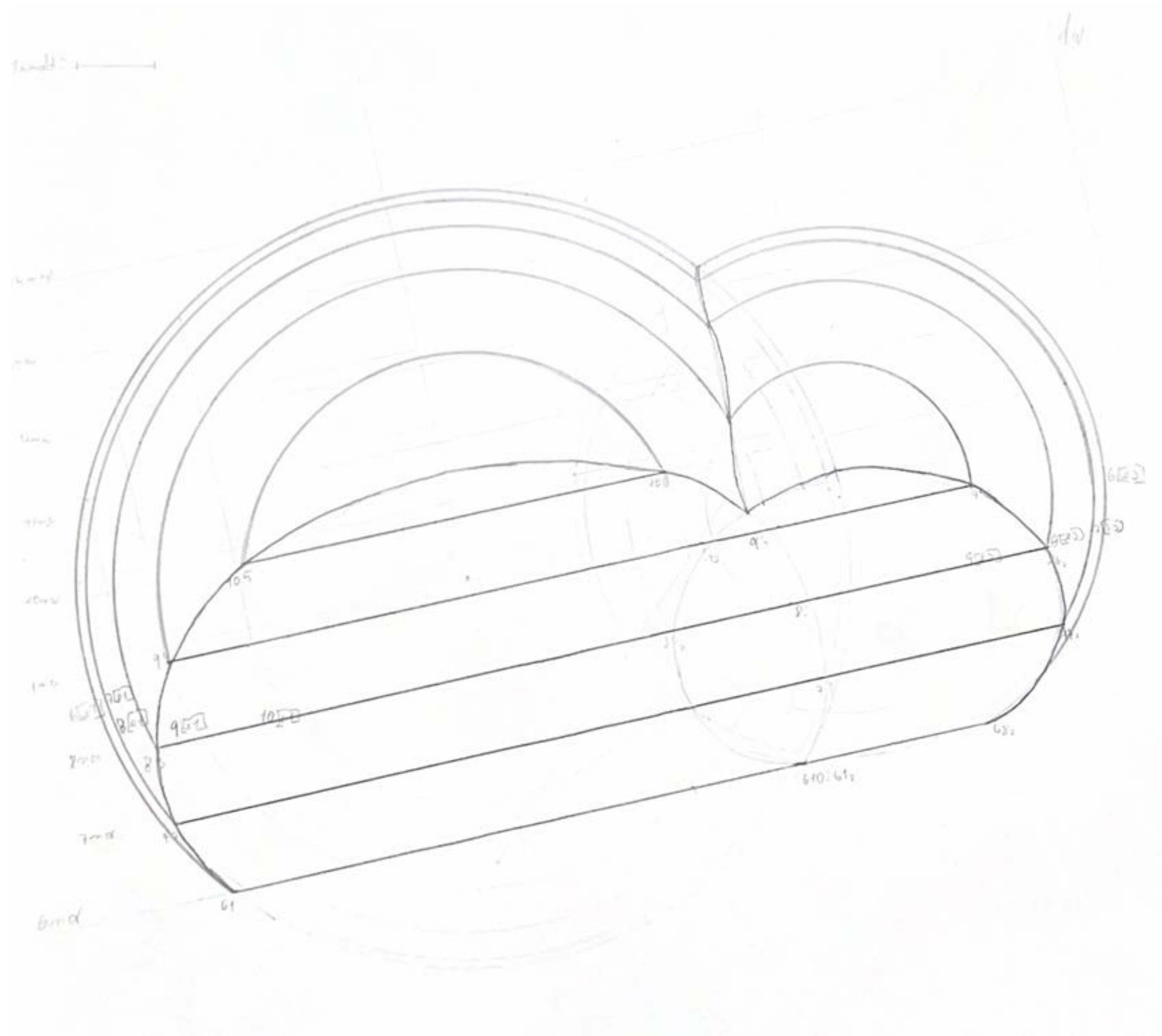
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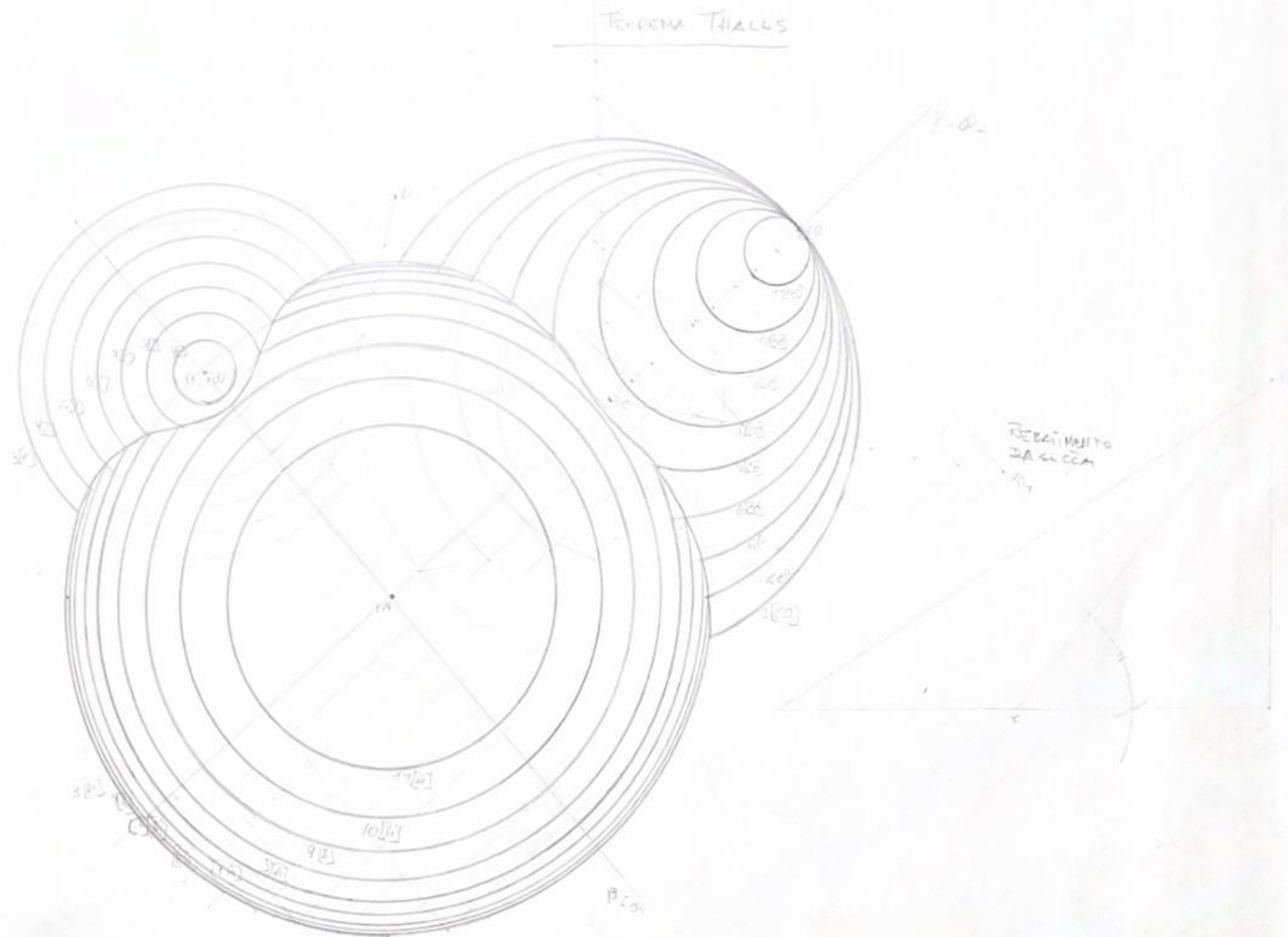
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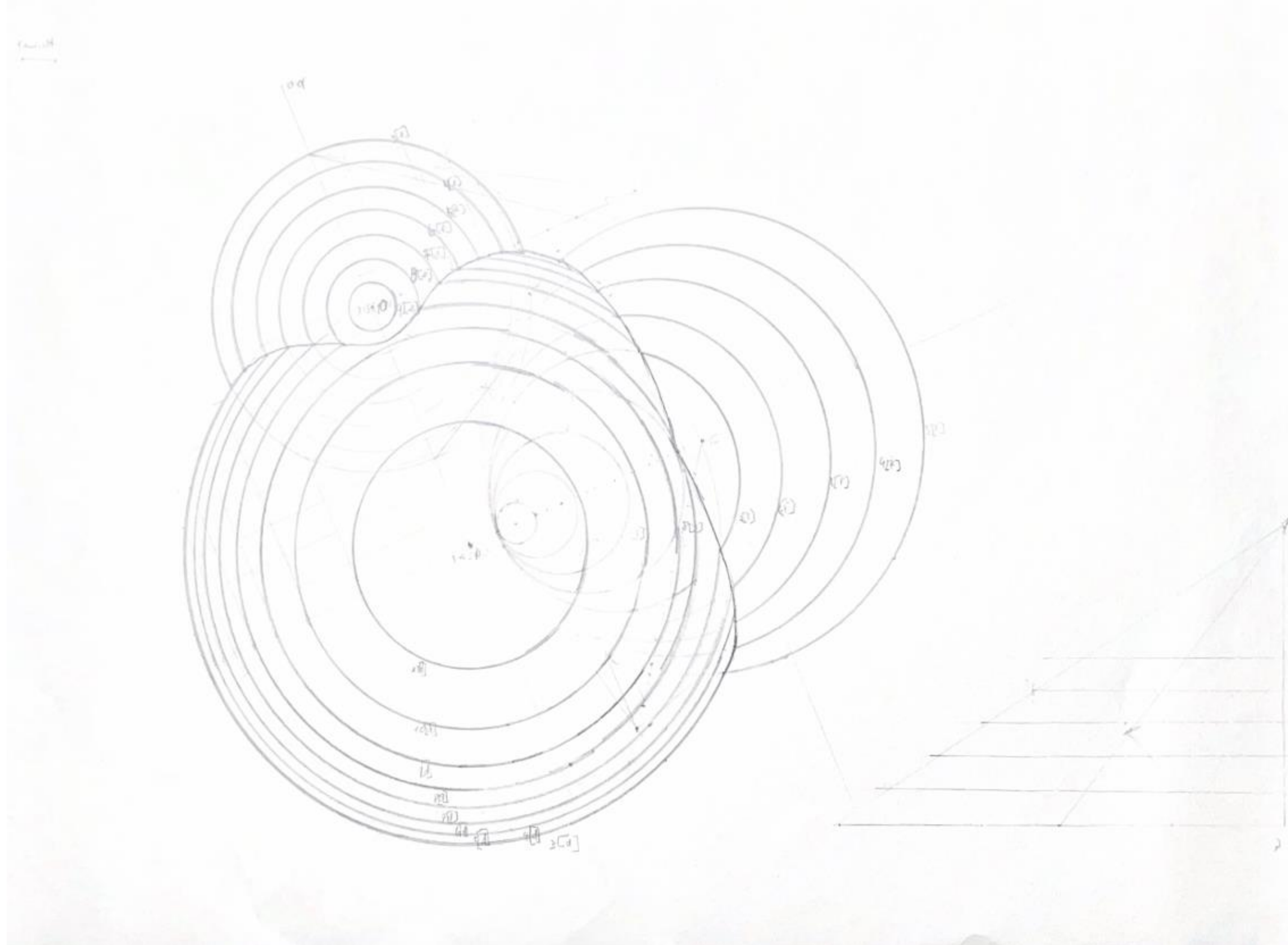
Aula. 6 – Interseções de superfícies



Exerc. 6.1 – Interseções de superfícies



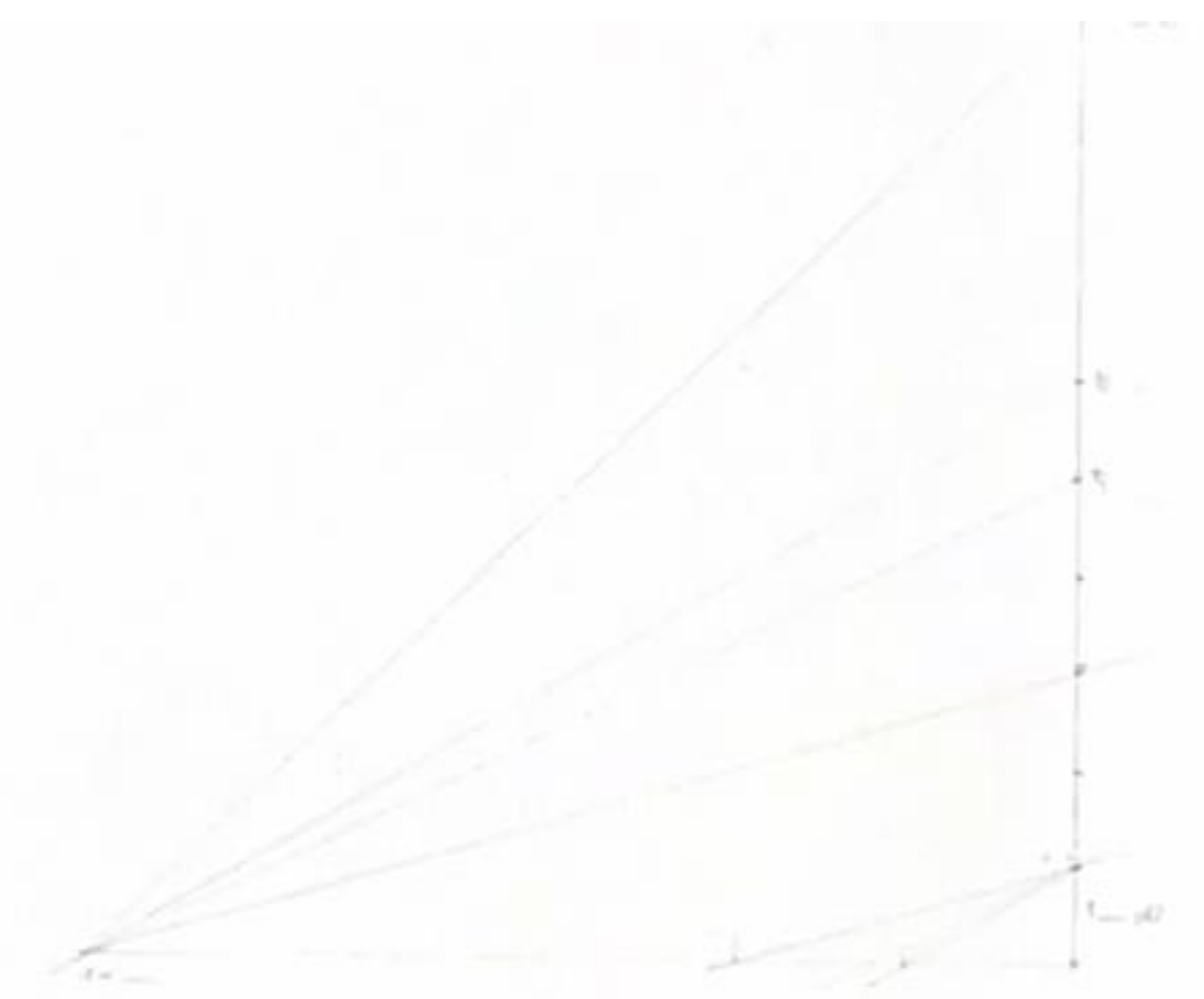
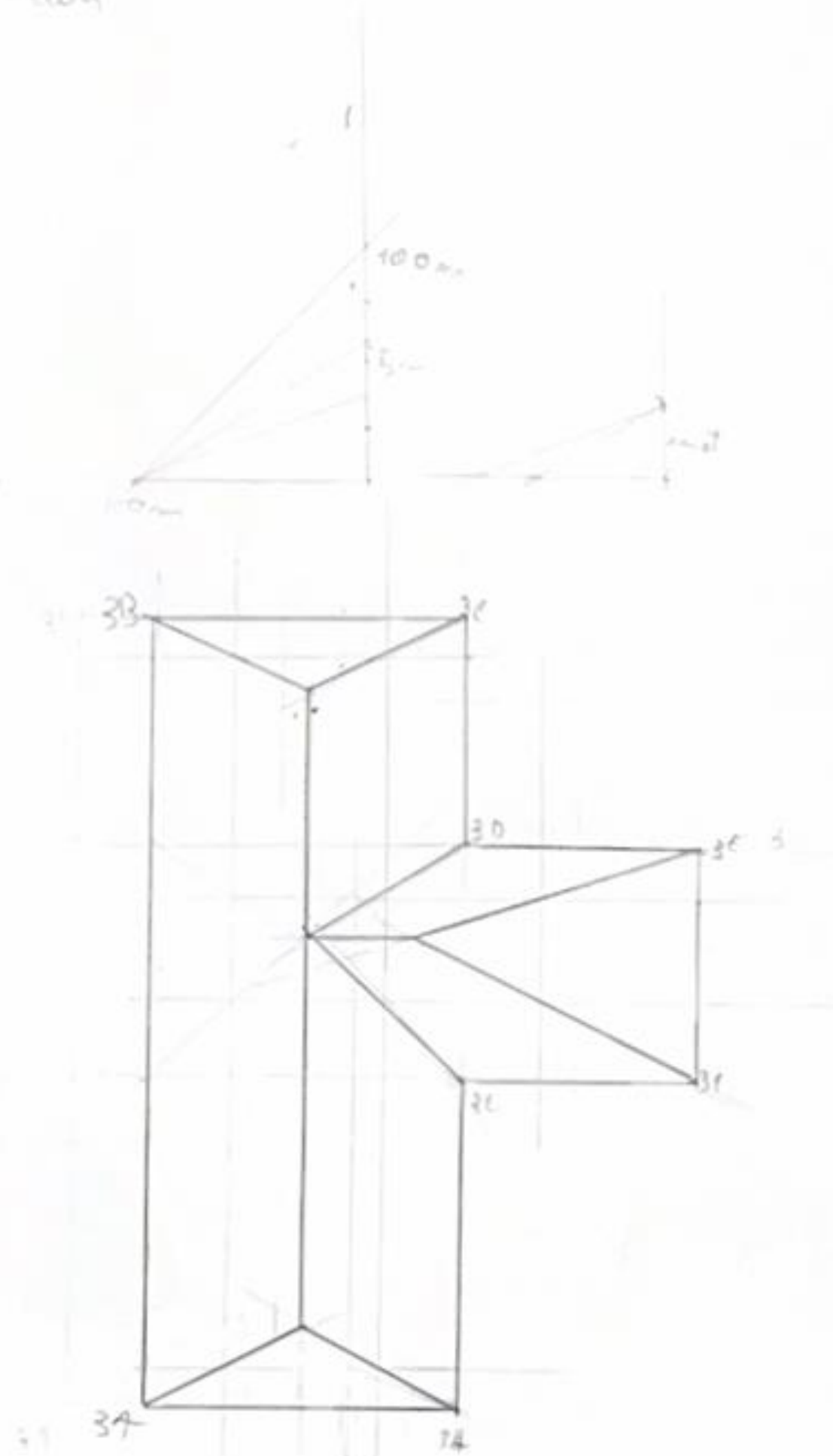
Exerc. 6.2 – Interseções de superfícies



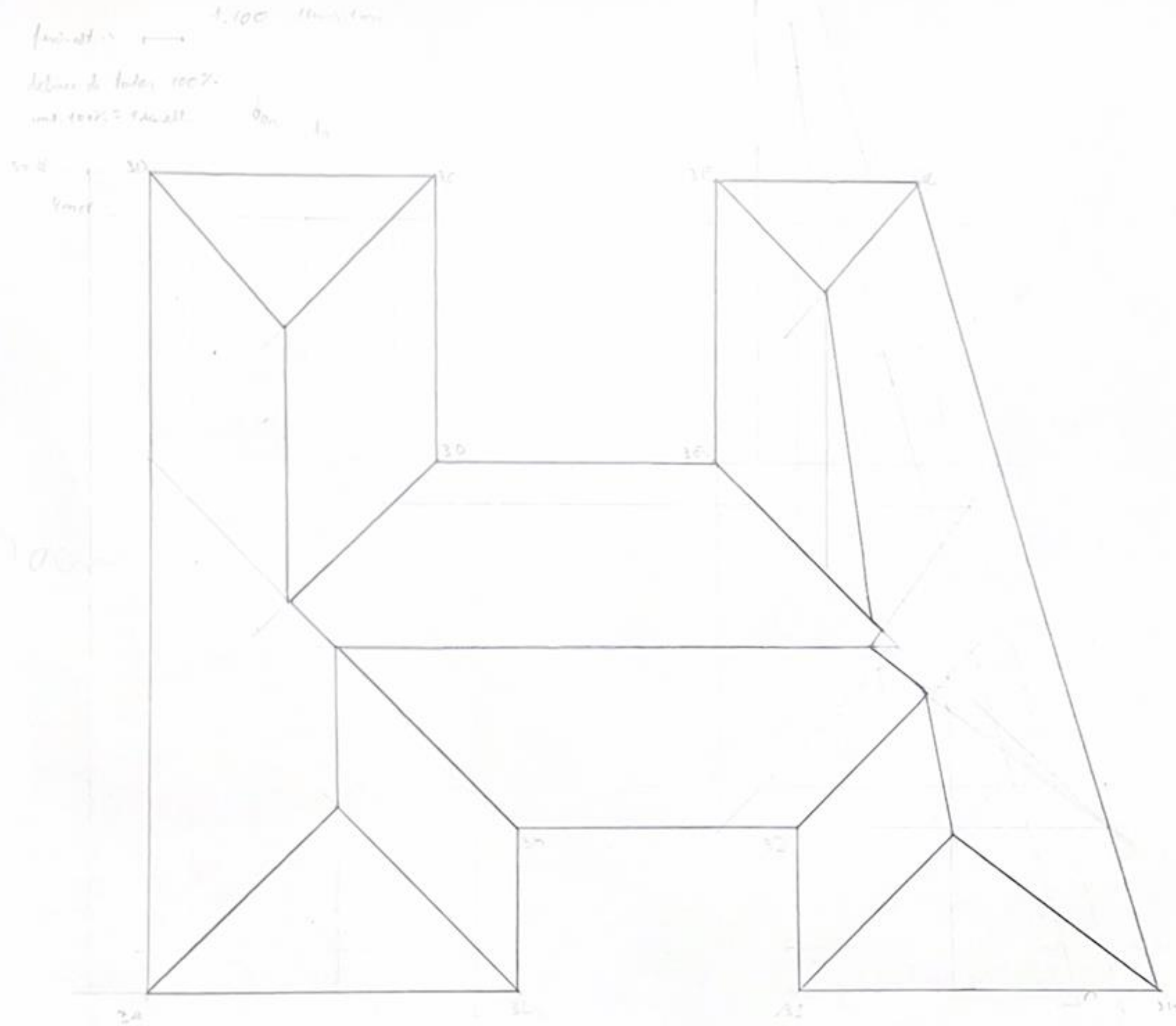
Exerc. 6.3 – Interseções de superfícies
(cone oblíquo com o vértice em outra posição)

linha = traço de vista

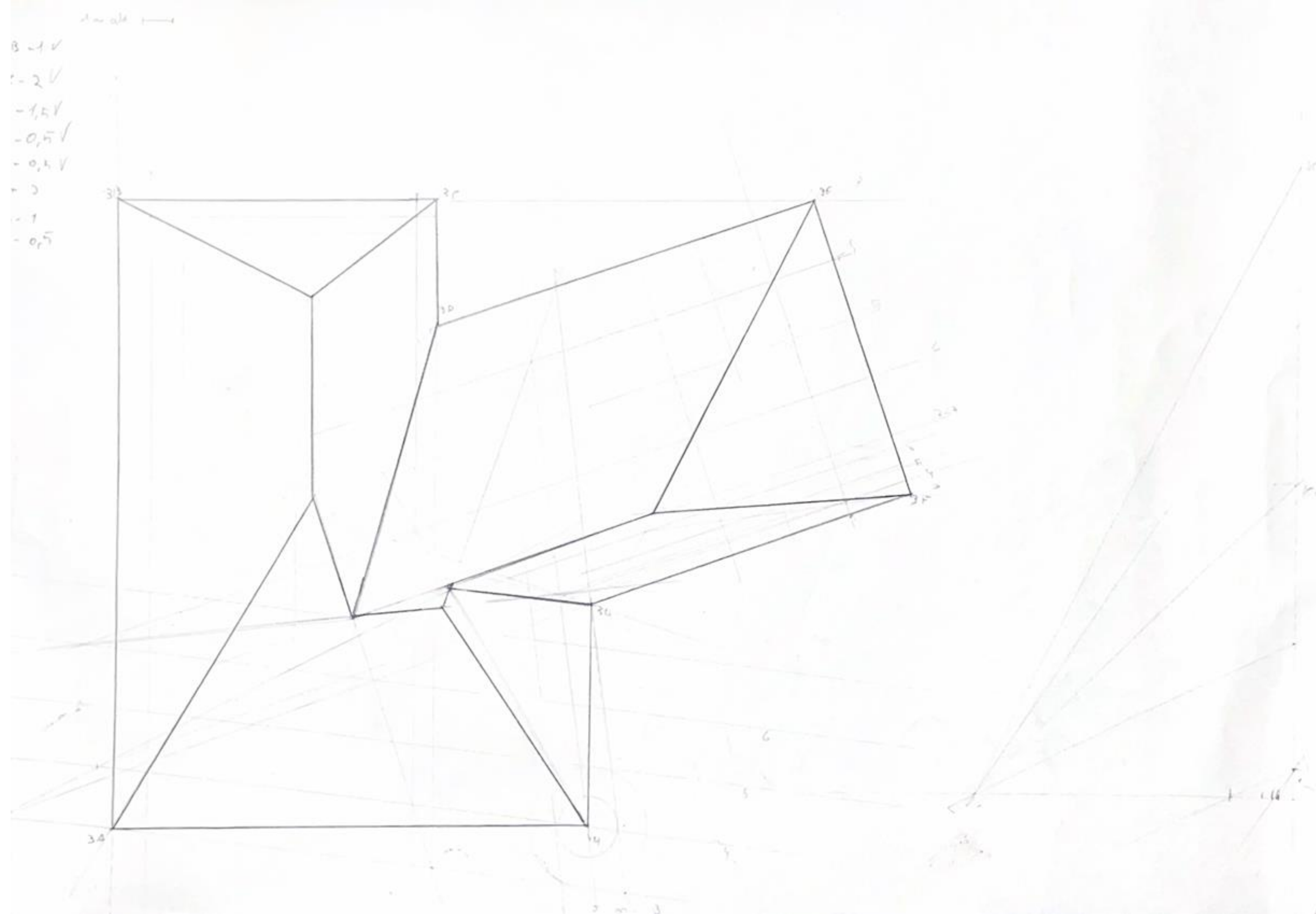
- 1.9 - 40°
- 2 - 2
- 0 - 100%
- 5 - 60%
- 7 - 0%
- 1 - 100%
- 1 - 30%
- 1 - 200%



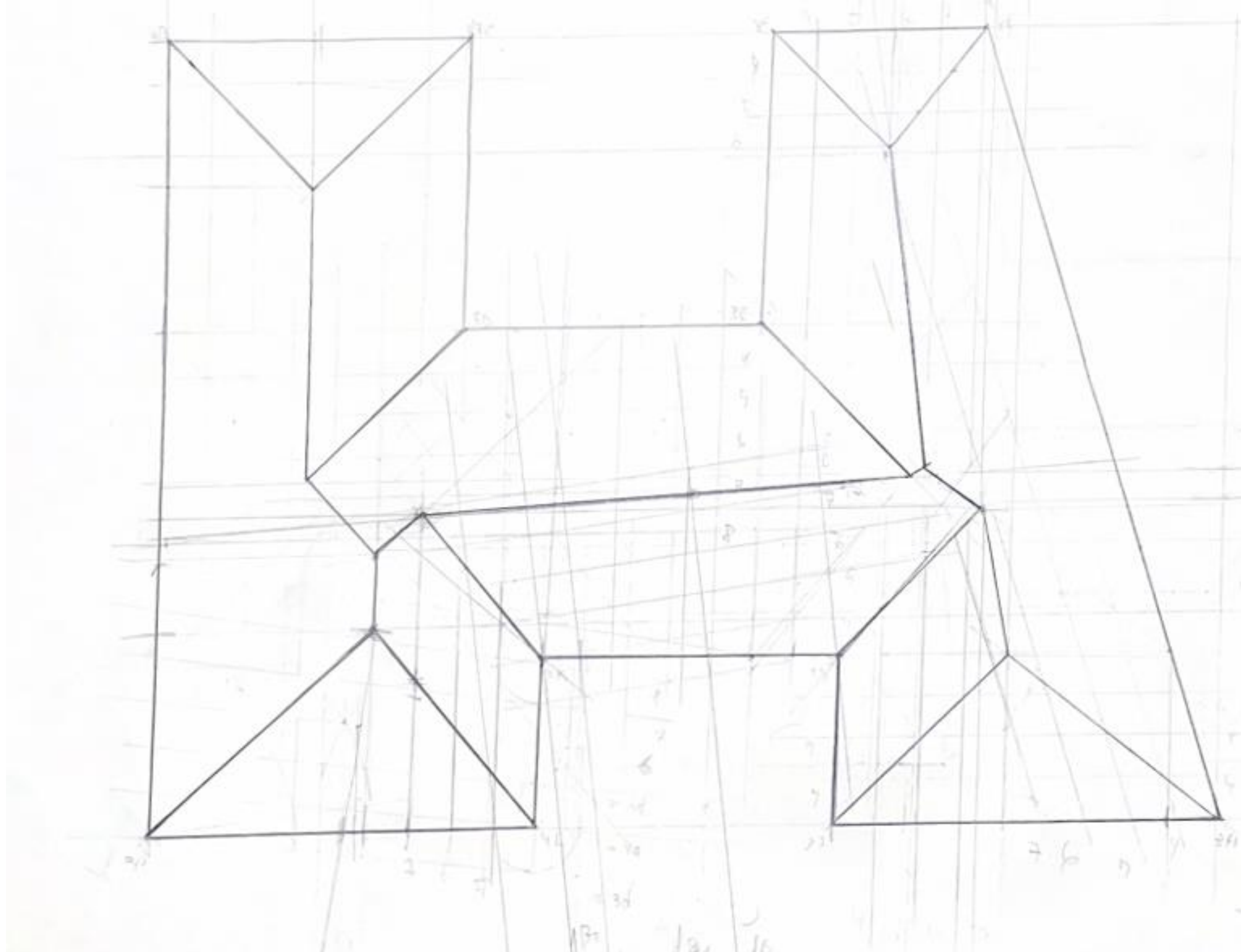
Aula. 7 – Coberturas



Exerc. 7.1 – Coberturas



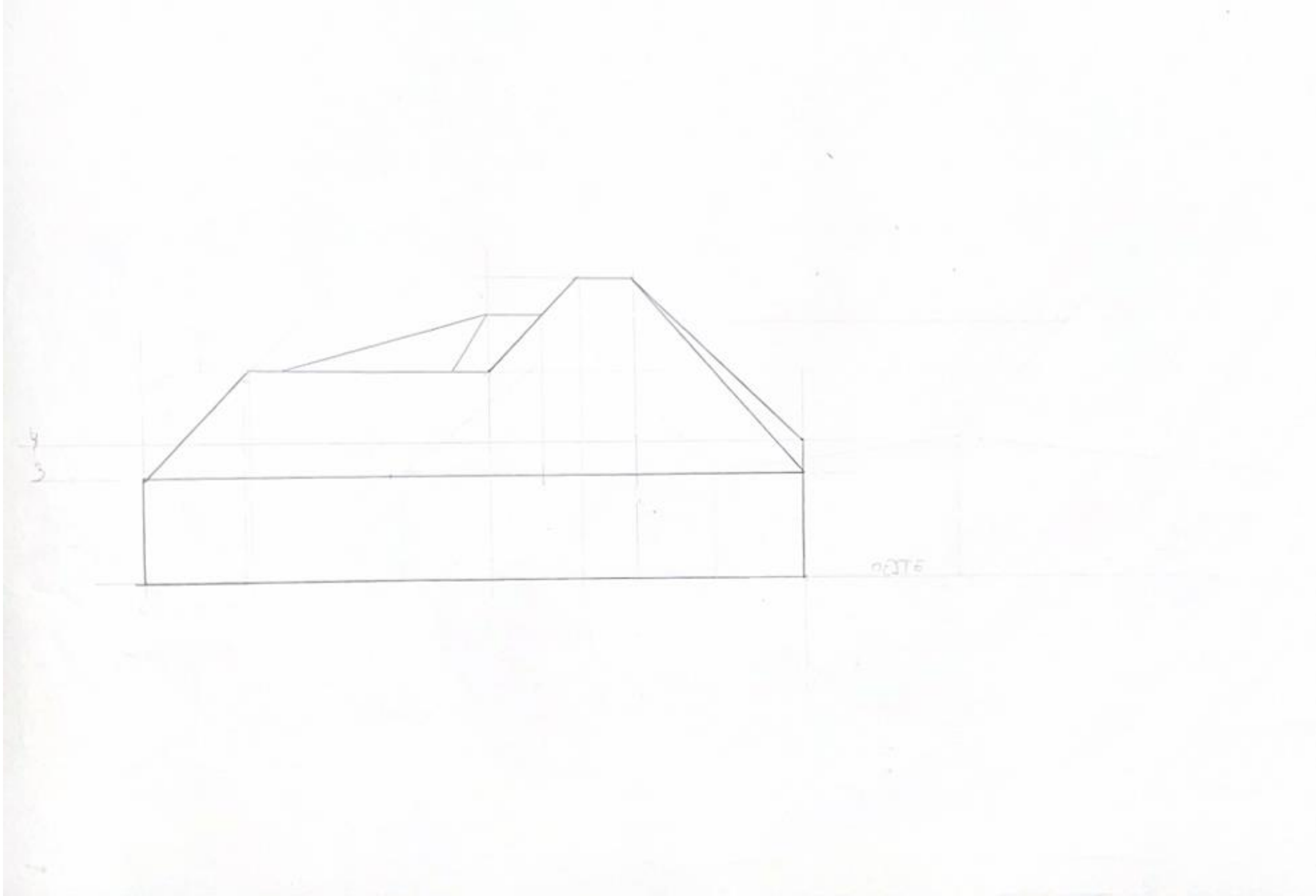
Aula. 8 – Coberturas



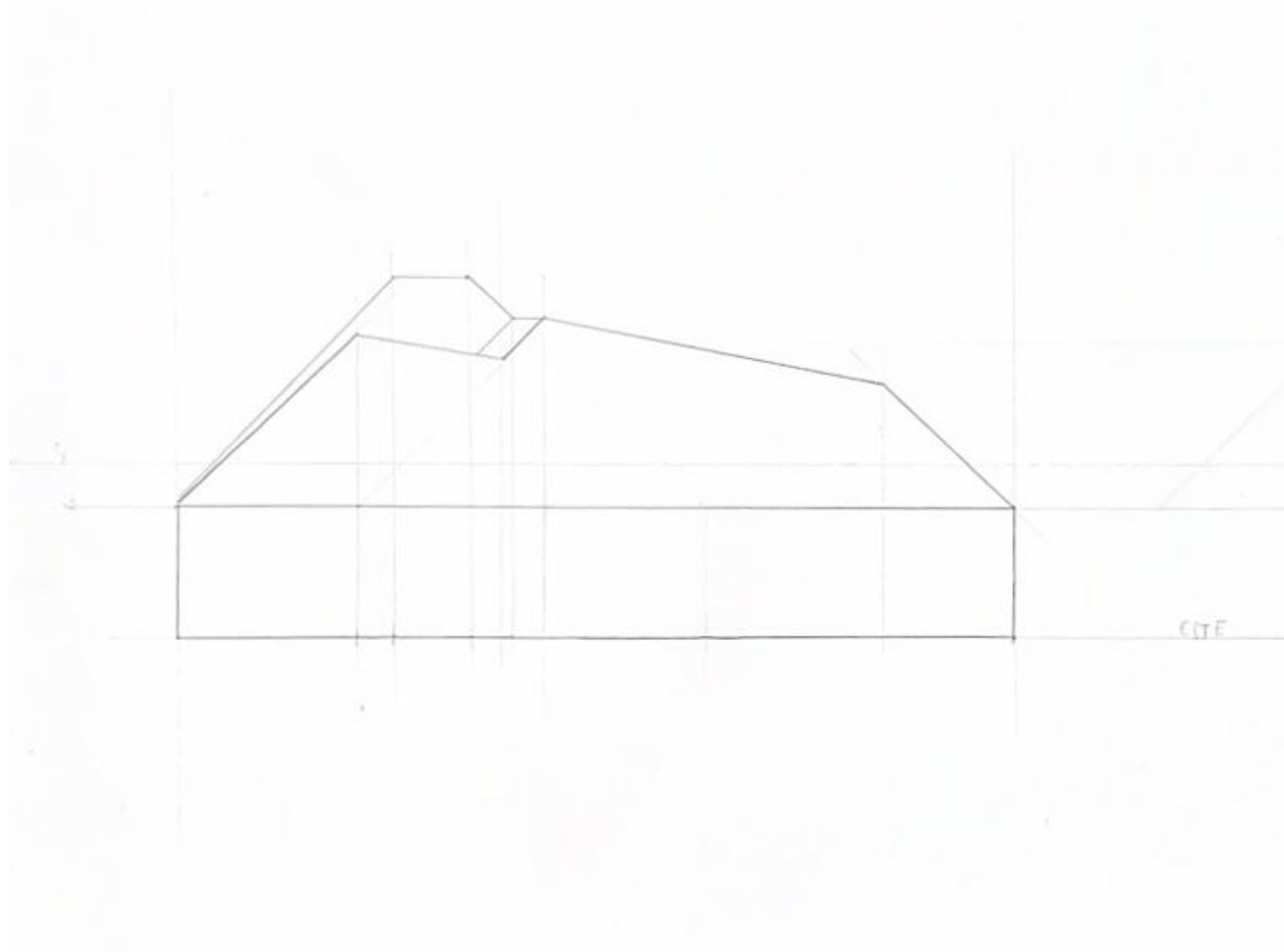
Exerc. 8.1 – Coberturas



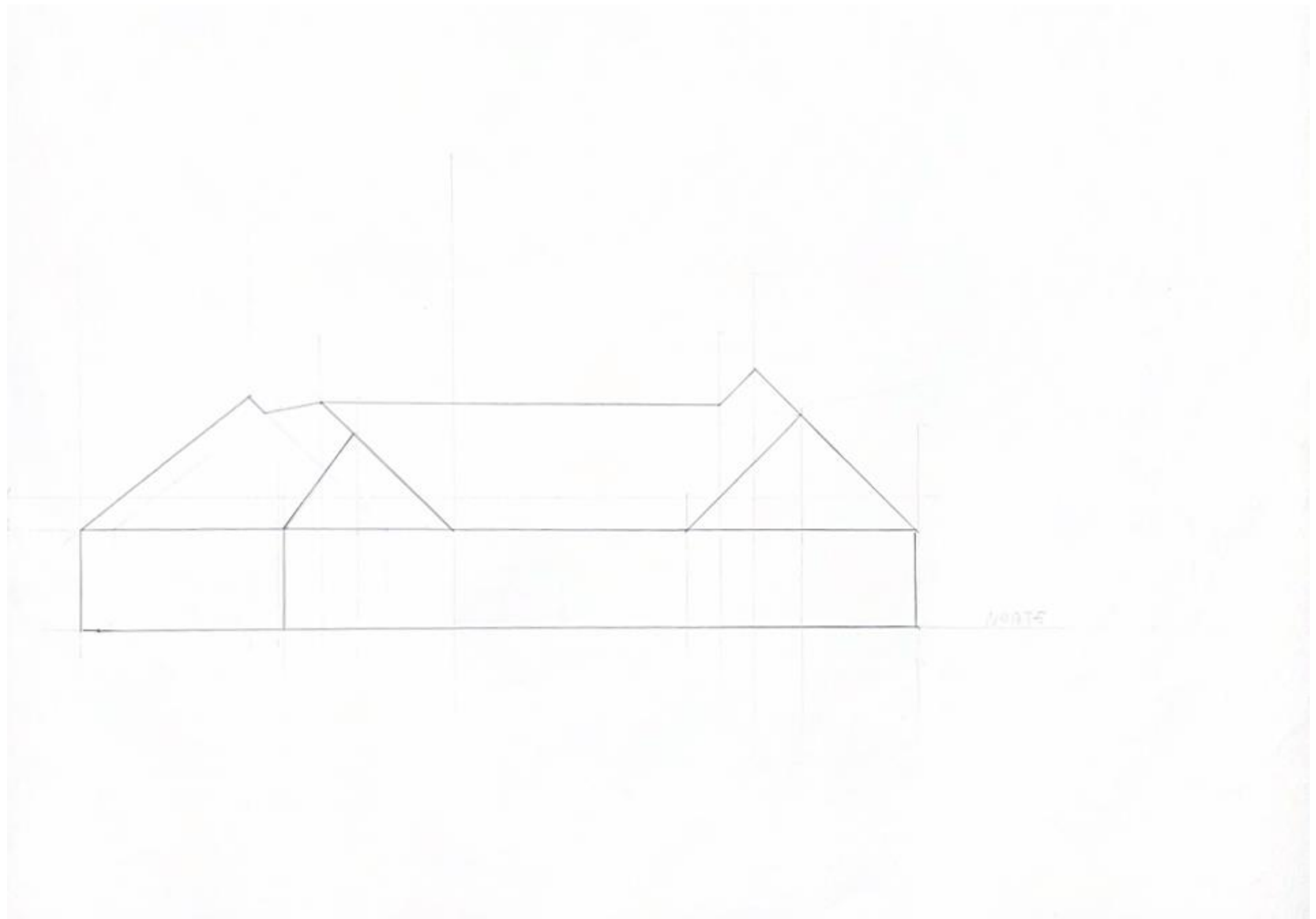
Exerc. 8.2 – Coberturas (Alçados)



Exerc. 8.3 – Coberturas (Alçados)

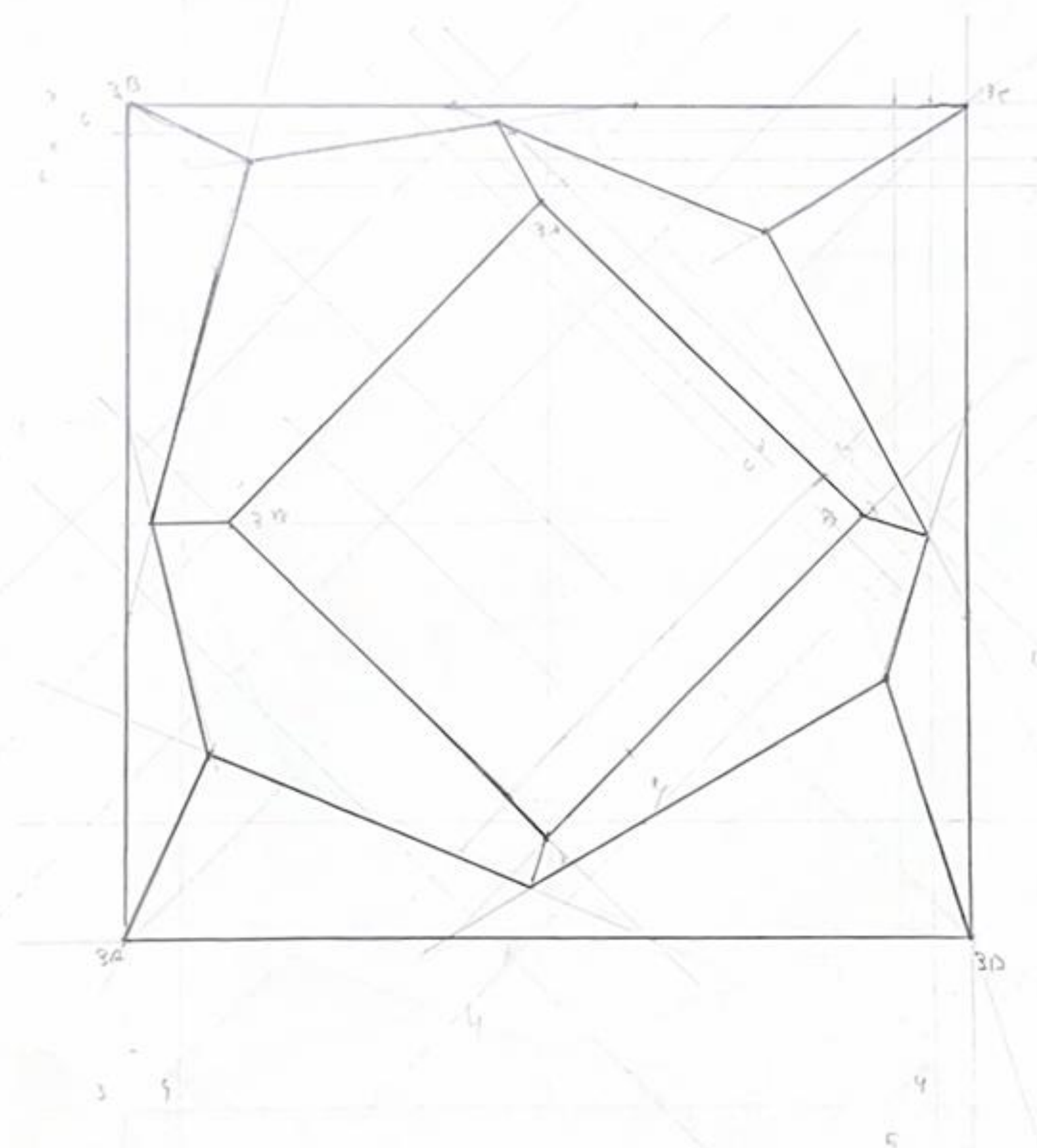


Exerc. 8.4 – Coberturas (Alçados)

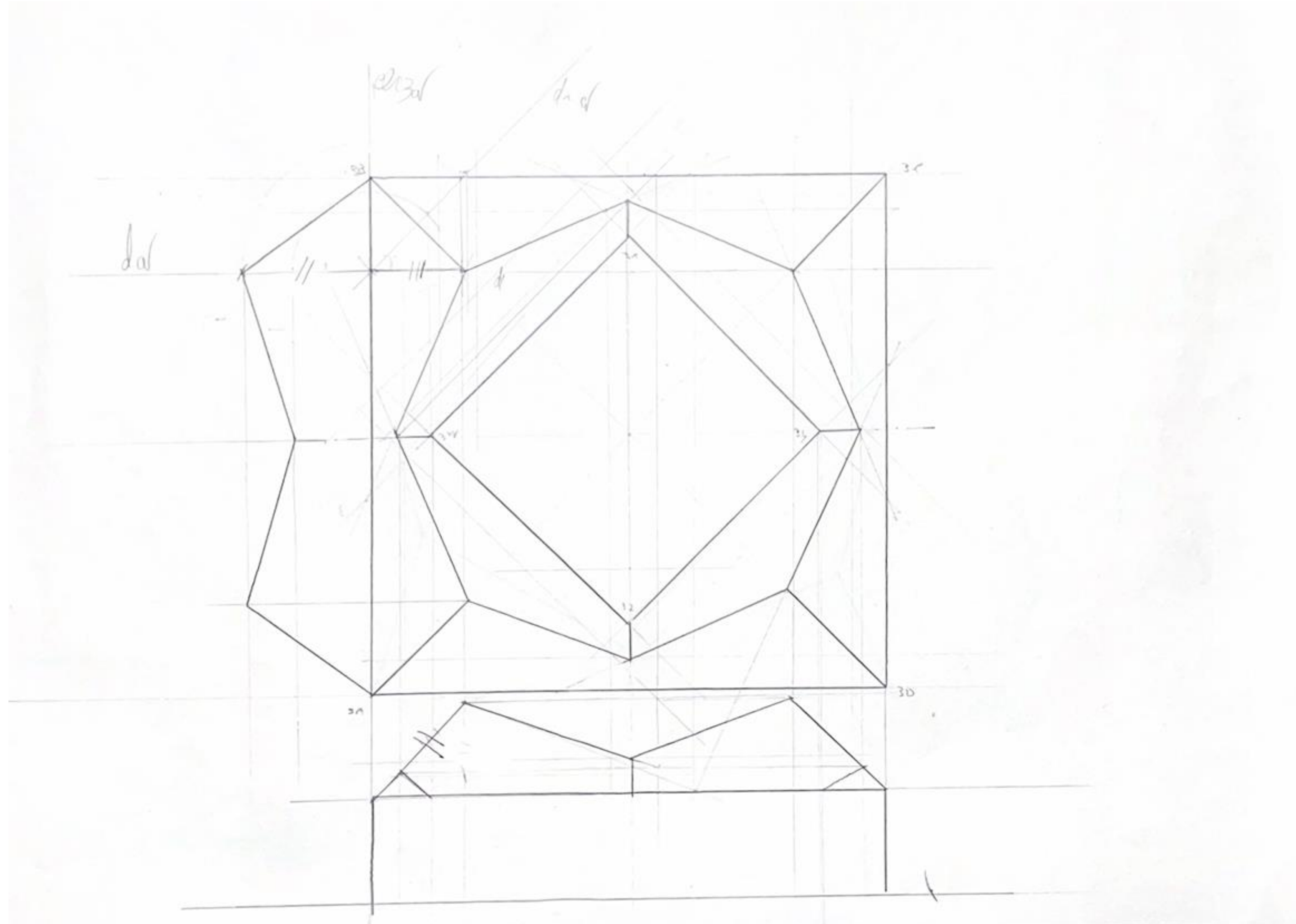


Exerc. 8.5 – Coberturas (Alçados)

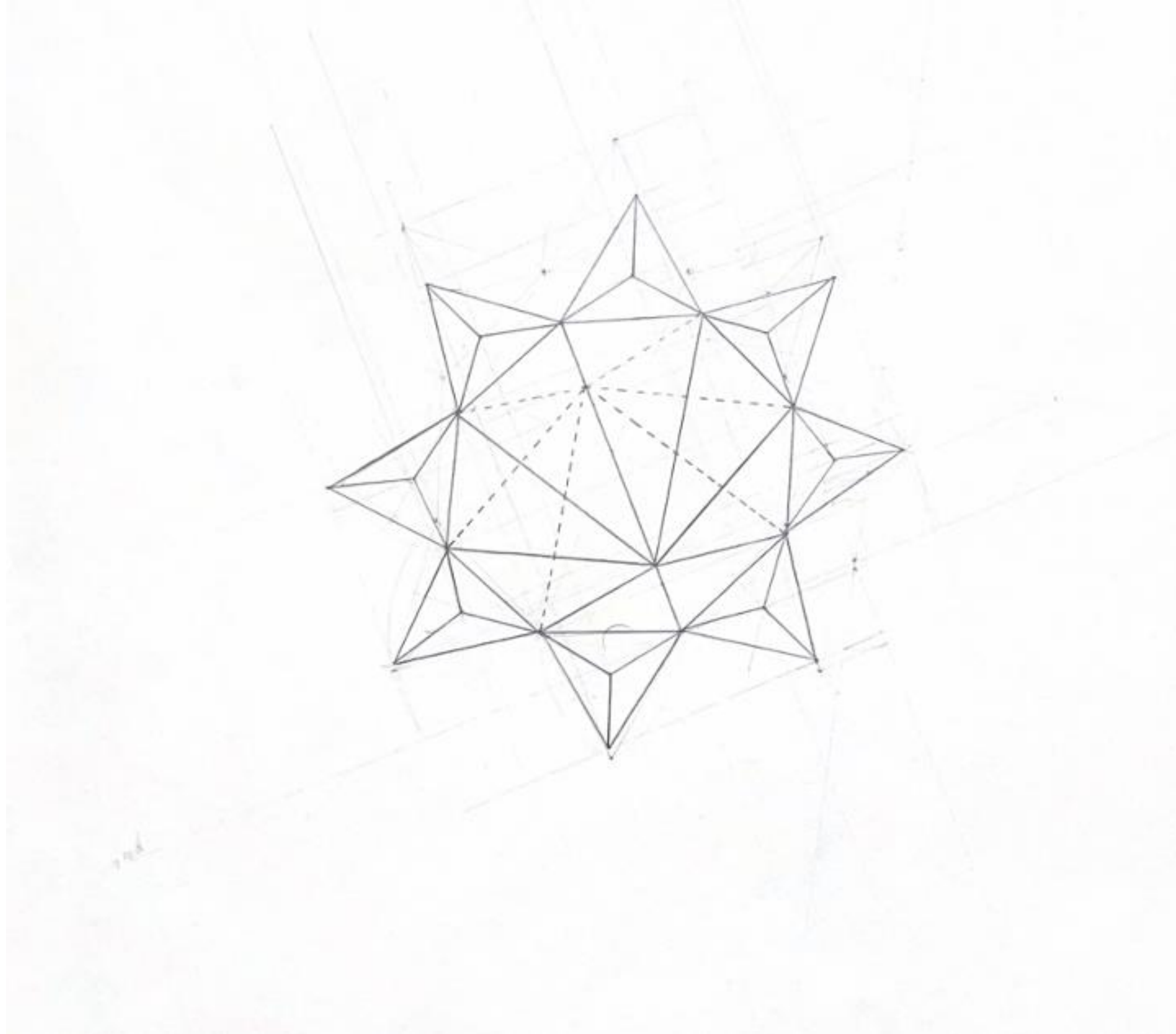
AB - 1 V
BC - 2 ✓
CD - 1,5 V
DA - 0,5 V
WX - 0,5 V
XY - 2 ✓
YZ - 1 ✓
ZW - 0,5



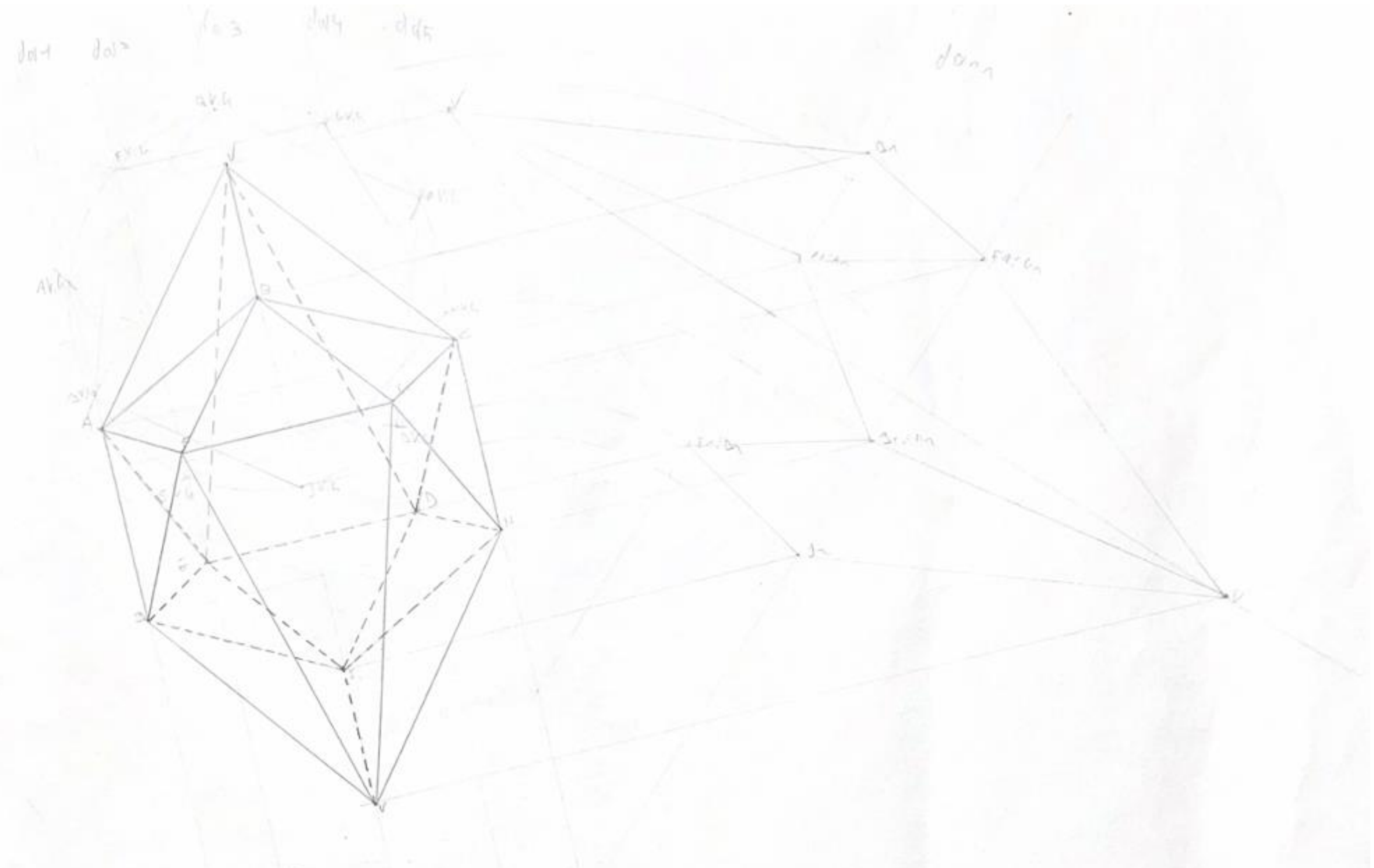
Aula 9 – Coberturas



Exerc.9.1 – Coberturas, alçado e rebatimento de uma face da cobertura

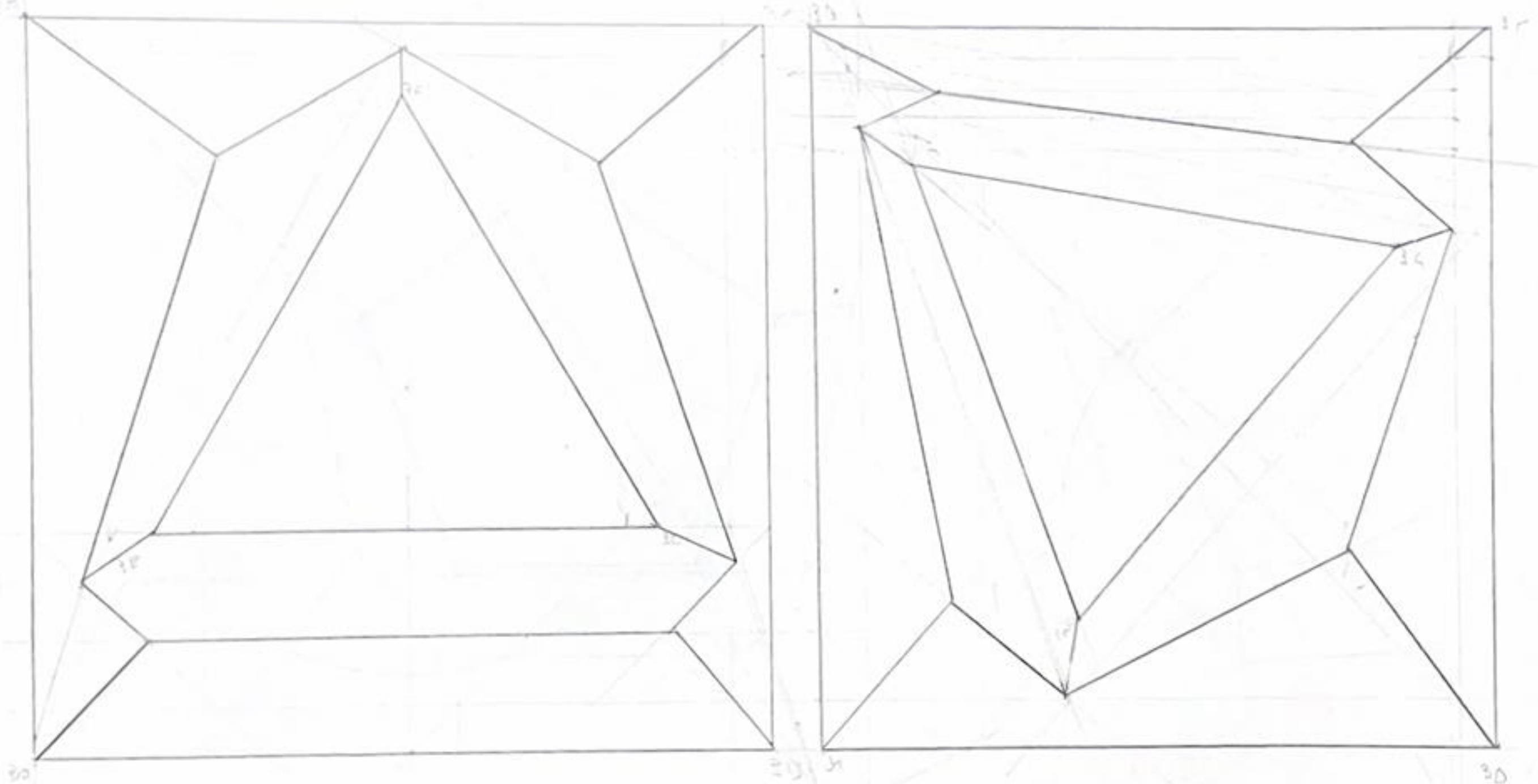


Exerc.9.2 – Duas pirâmides octogonais com a mesma base, e alturas opostas



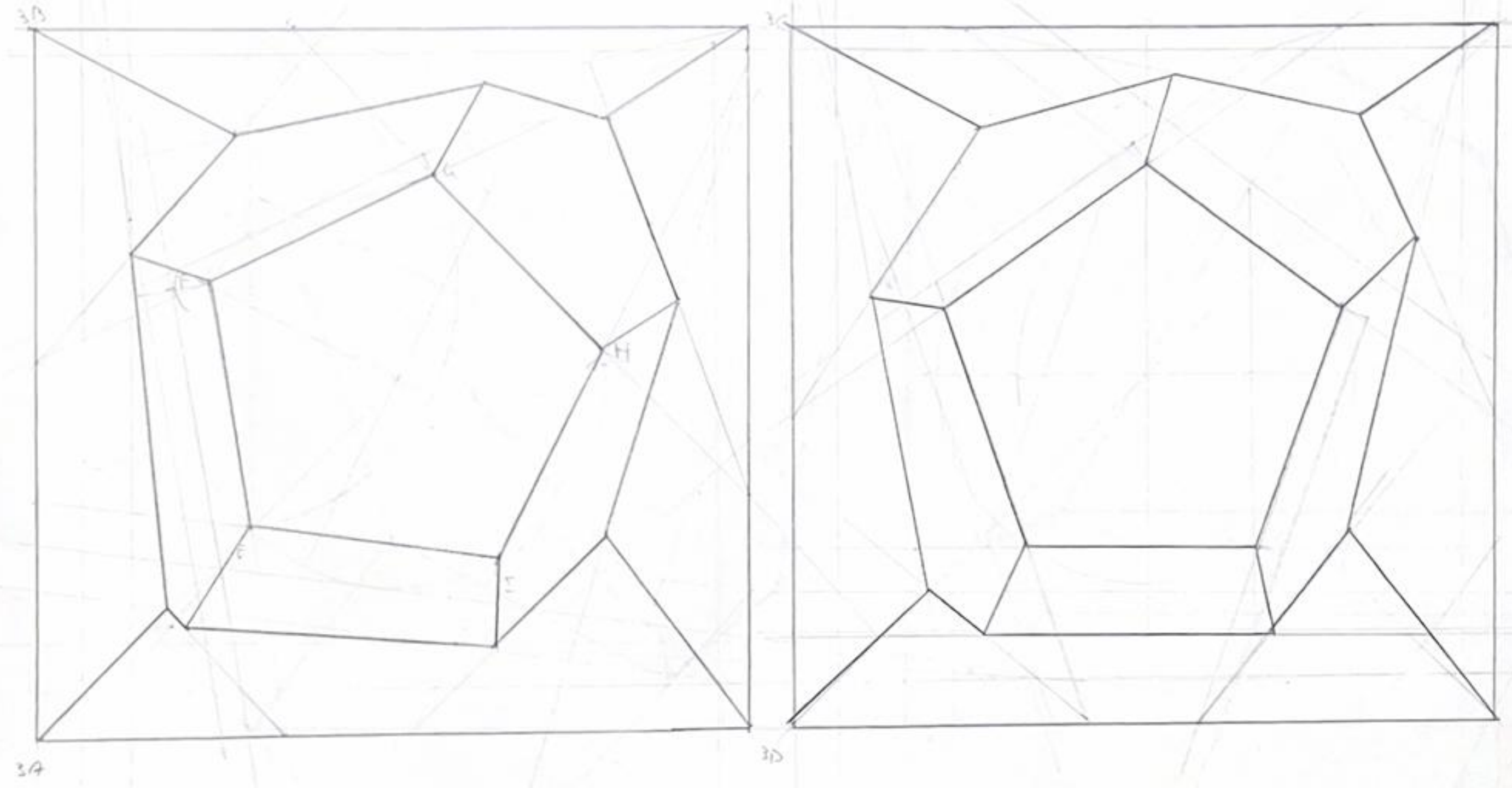
Exerc.9.3 – Duas pirâmides assentes em um antiprisma pentagonal, cada base da pirâmide coincide com uma base do antiprisma

AB - 10
BC - 20
CD - 10
DA - 10
EF - 10
FG - 20
GH - 10



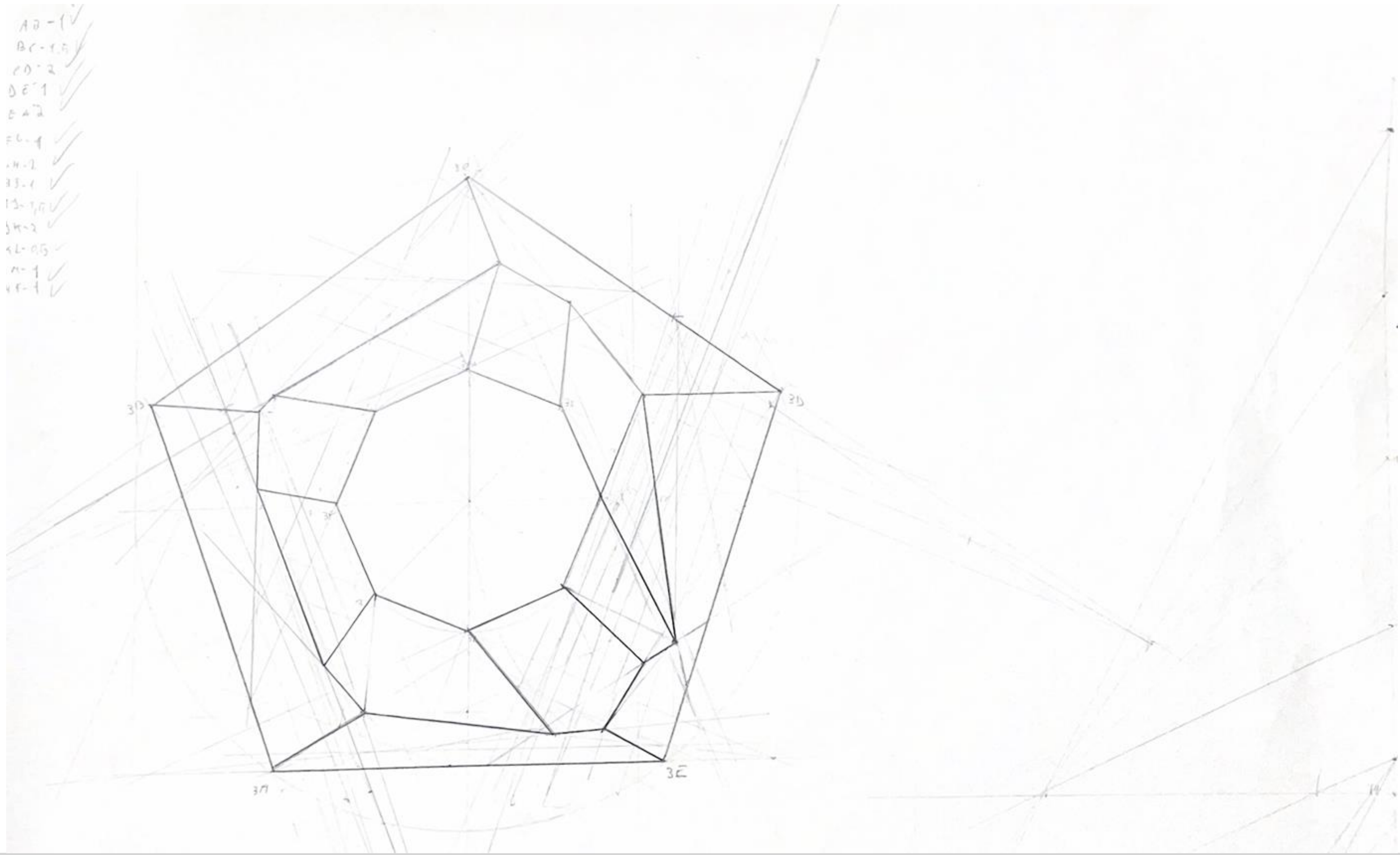
Aula 10 – Coberturas

B - 1V
C - 2V
D - 3V
A - 1V
E - 1V
F - 2V
G - 1V
H - 1V



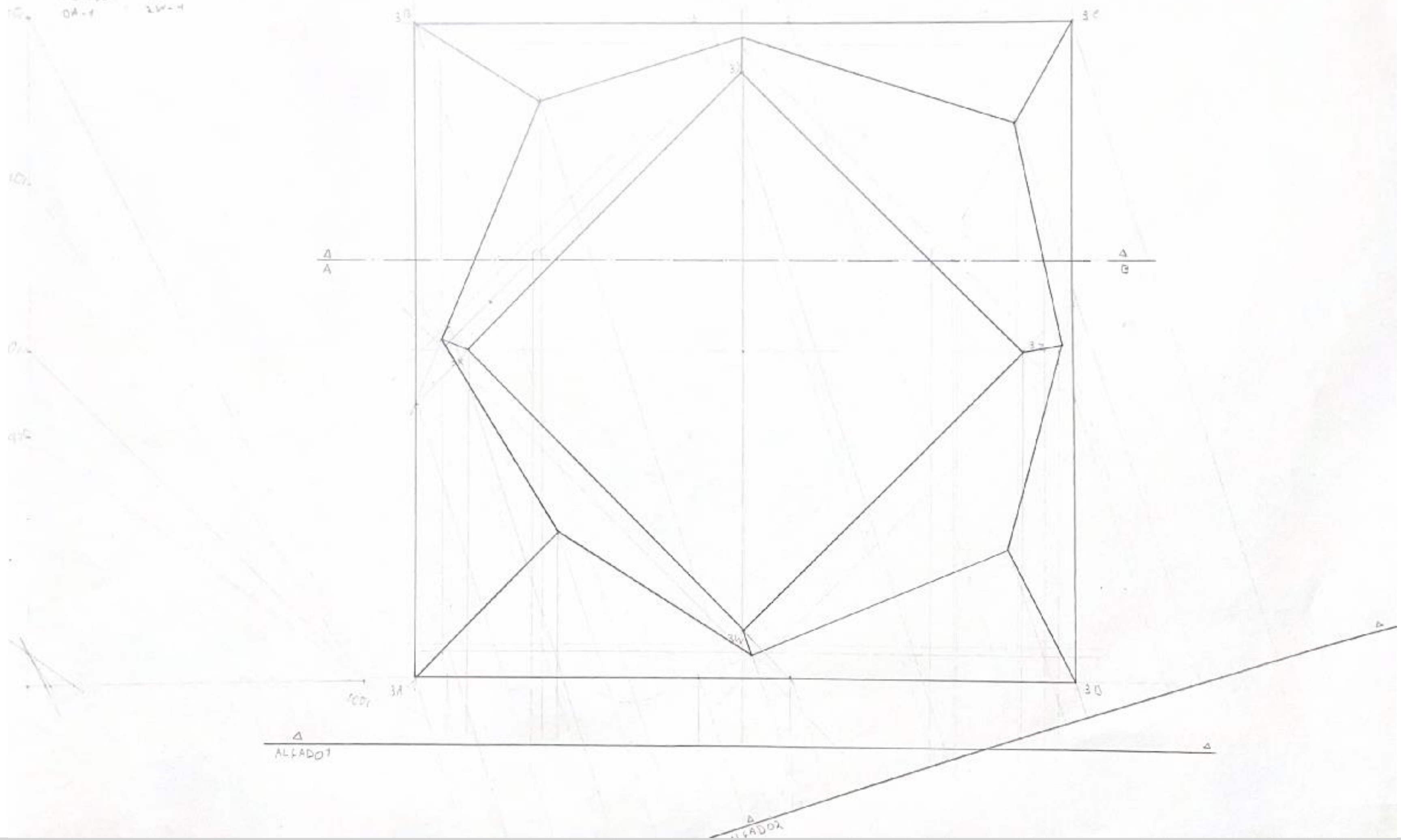
Exerc.10.1 – Coberturas

- AB-1 ✓
- BC-1.5 ✓
- CD-2 ✓
- DE-1 ✓
- EA-2 ✓
- FB-1 ✓
- FC-2 ✓
- FD-1 ✓
- FE-1.5 ✓
- GA-2 ✓
- GB-1 ✓
- GC-1 ✓

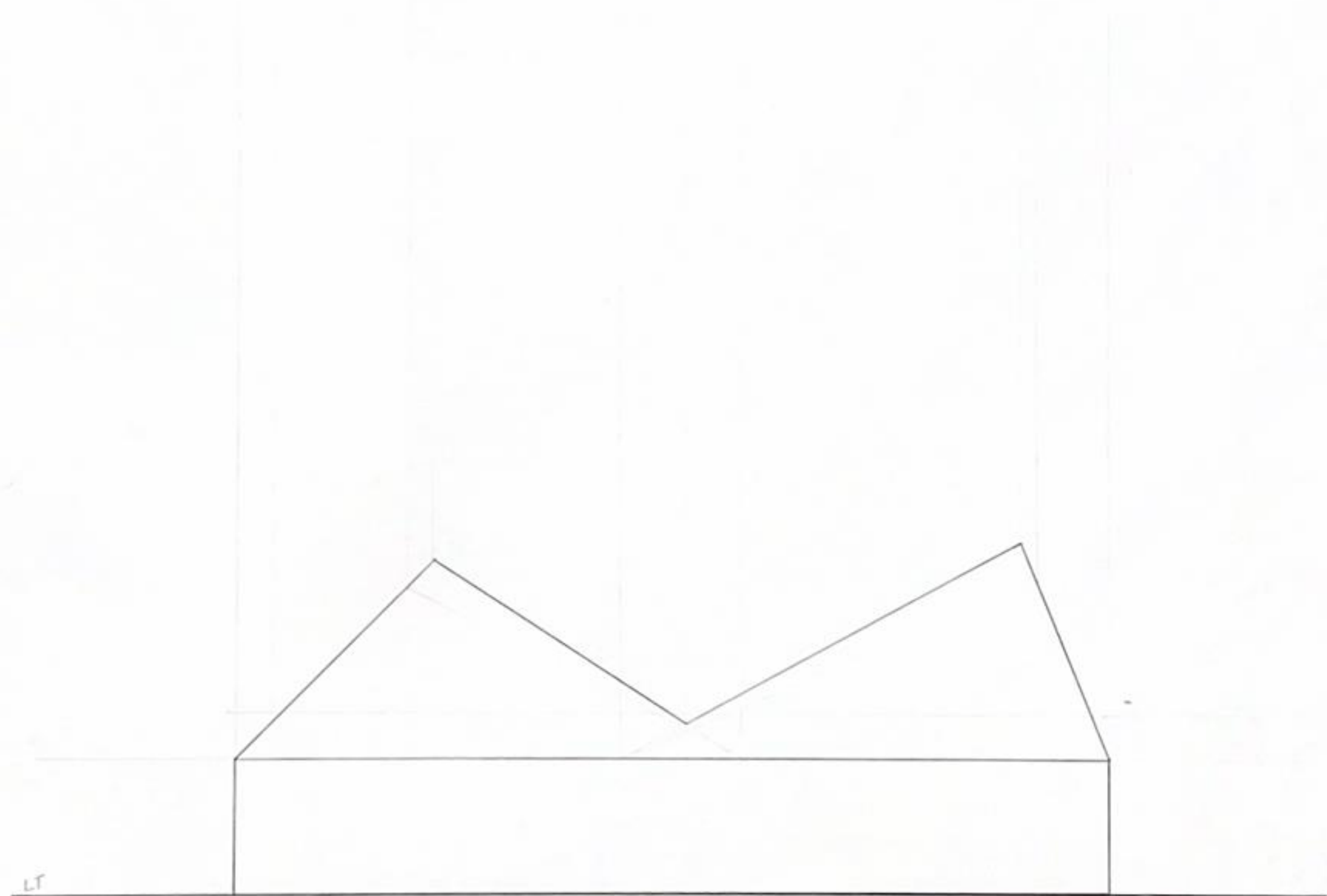


Exerc.10.2 – Coberturas

Área 1/100
 AB=100m WA=2
 BC=115 XY=49m
 CD=100m YZ=0,35
 DA=1 ZW=4

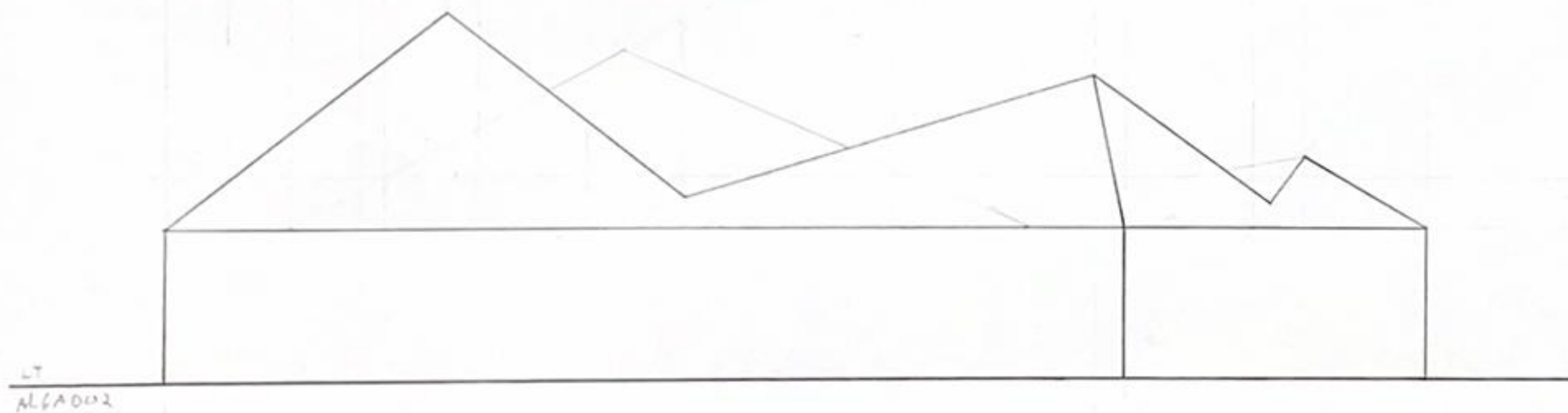


Aula 11 e exerc. 11.1 – Coberturas

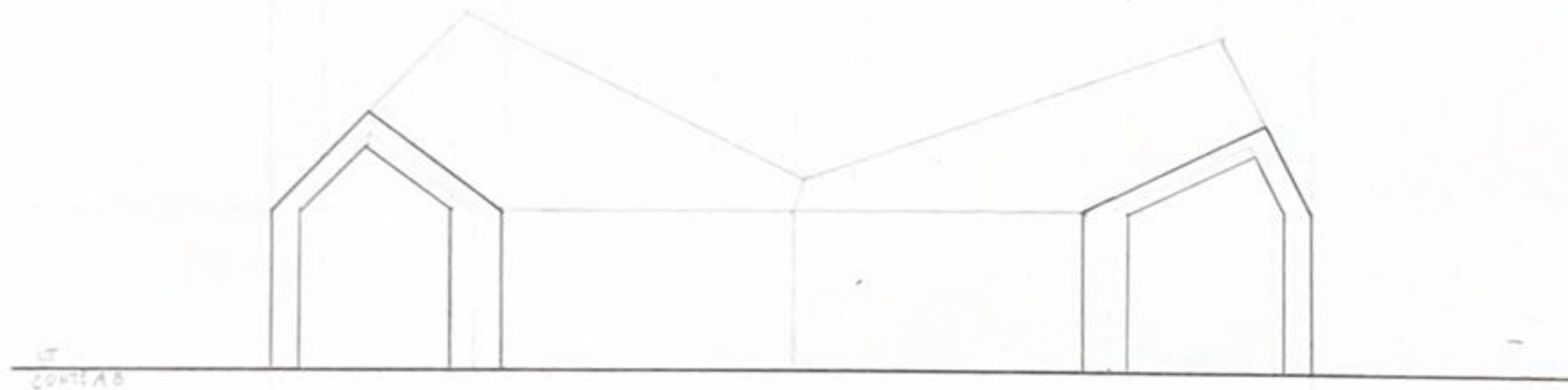


LT
ALÇADO 1

Exerc. 11.2 – Alçado da cobertura



Exerc. 11.3 – Alçado da cobertura

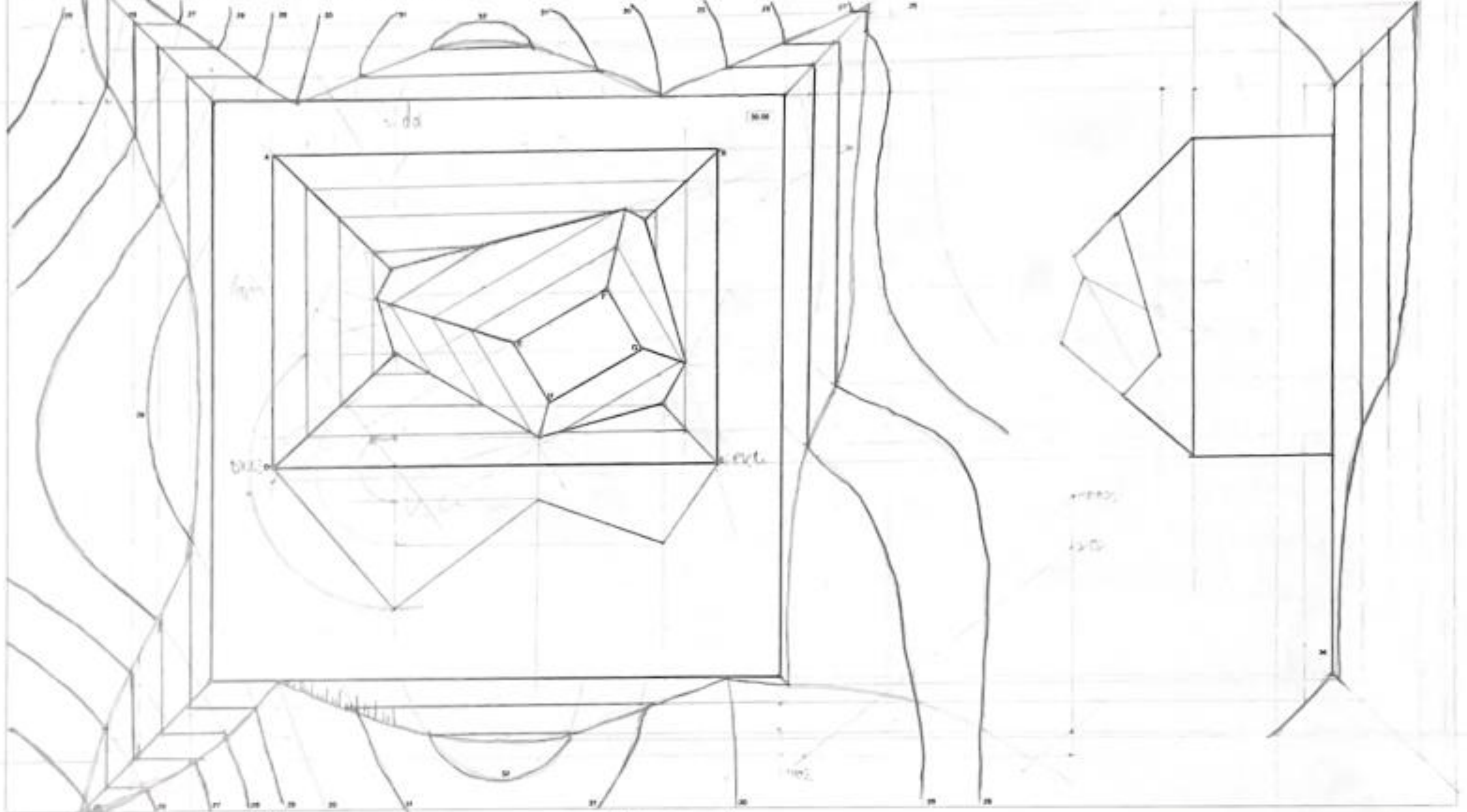


Exerc. 11.4 – Corte da cobertura

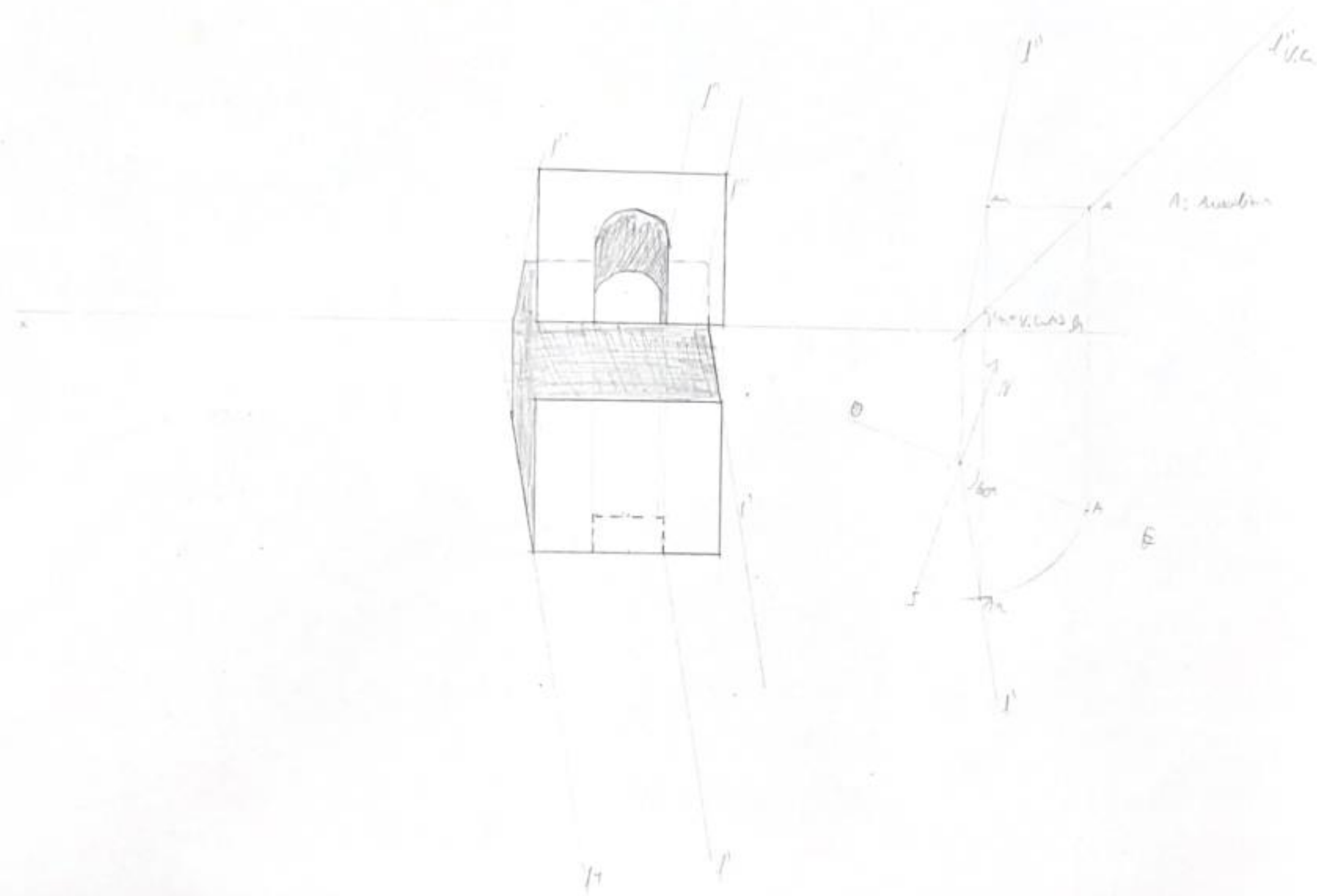


Aula 13 – Topografia e cobertura

EXERCÍCIO
Os polígonos dados [ABCD] e [FGHI], na escala 1:500, correspondem ao limite de uma construção com um pátio (pequeno retângulo interior). Todos os vértices dos polígonos têm cota 30m.
A cobertura da construção tem uma pendente constante de 60%.
a) Qual o intervalo correspondente à pendente dada (apresente os cálculos *analíticos* ou *gráficos*)? (1 val)
b) Resolva a planta da cobertura não esquecendo de destacar as linhas de nível do objecto final. (8 val)
c) Resolva as taludes de escavação e aterro da plataforma dada à cota 30m considerando a pendente de 100%, não esquecendo de destacar as linhas de nível finais. (5 val)
d) Desenhe o alçado indicado, incluindo edifício, talhados e taludes, considerando a cota como referência para a cota 30m. Em relação aos taludes, considere apenas os que são visíveis. (5 val)
e) Determine a verdadeira grandeza da superfície do talhado que contém o segmento [CD]. (2 val)

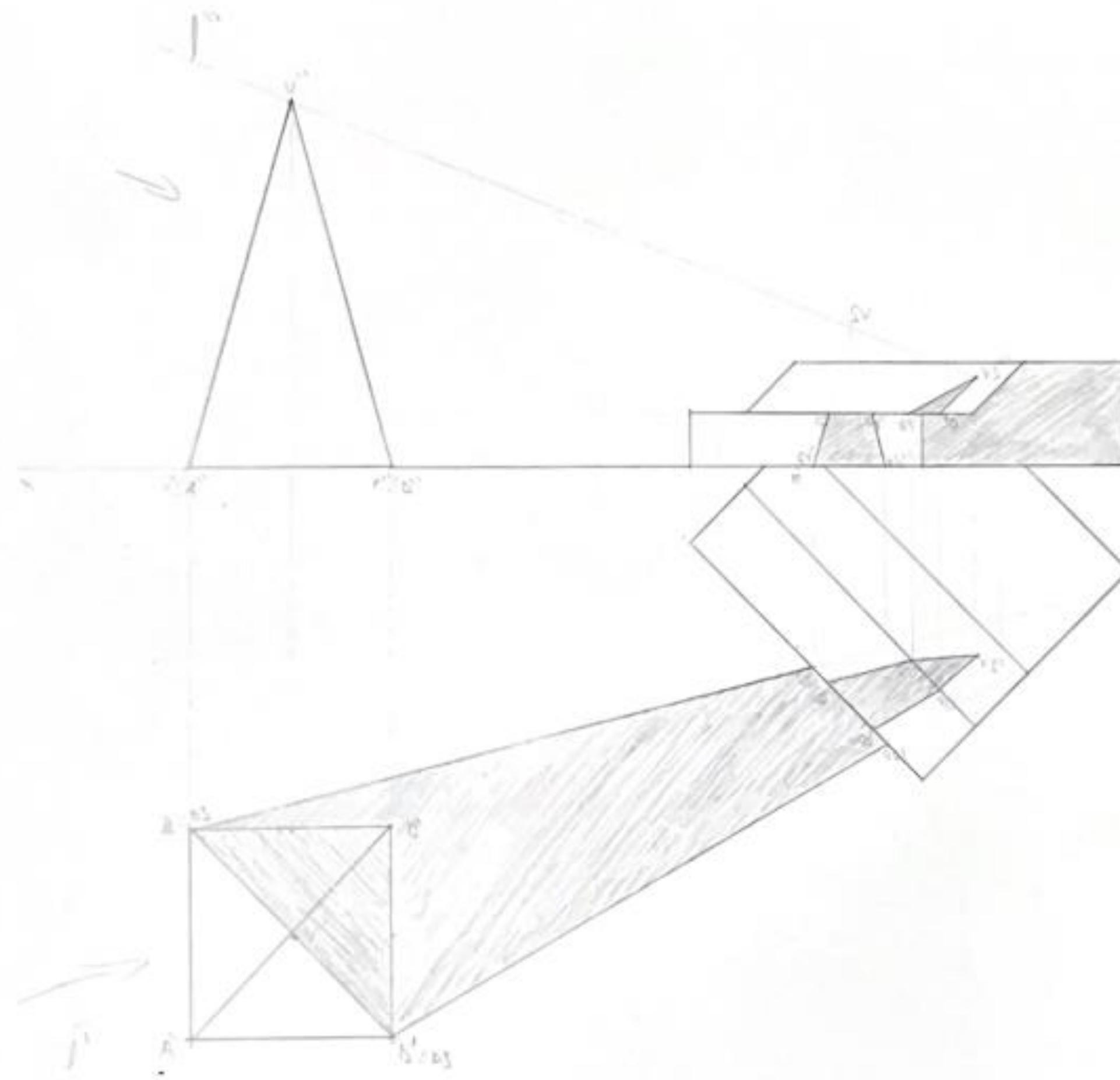


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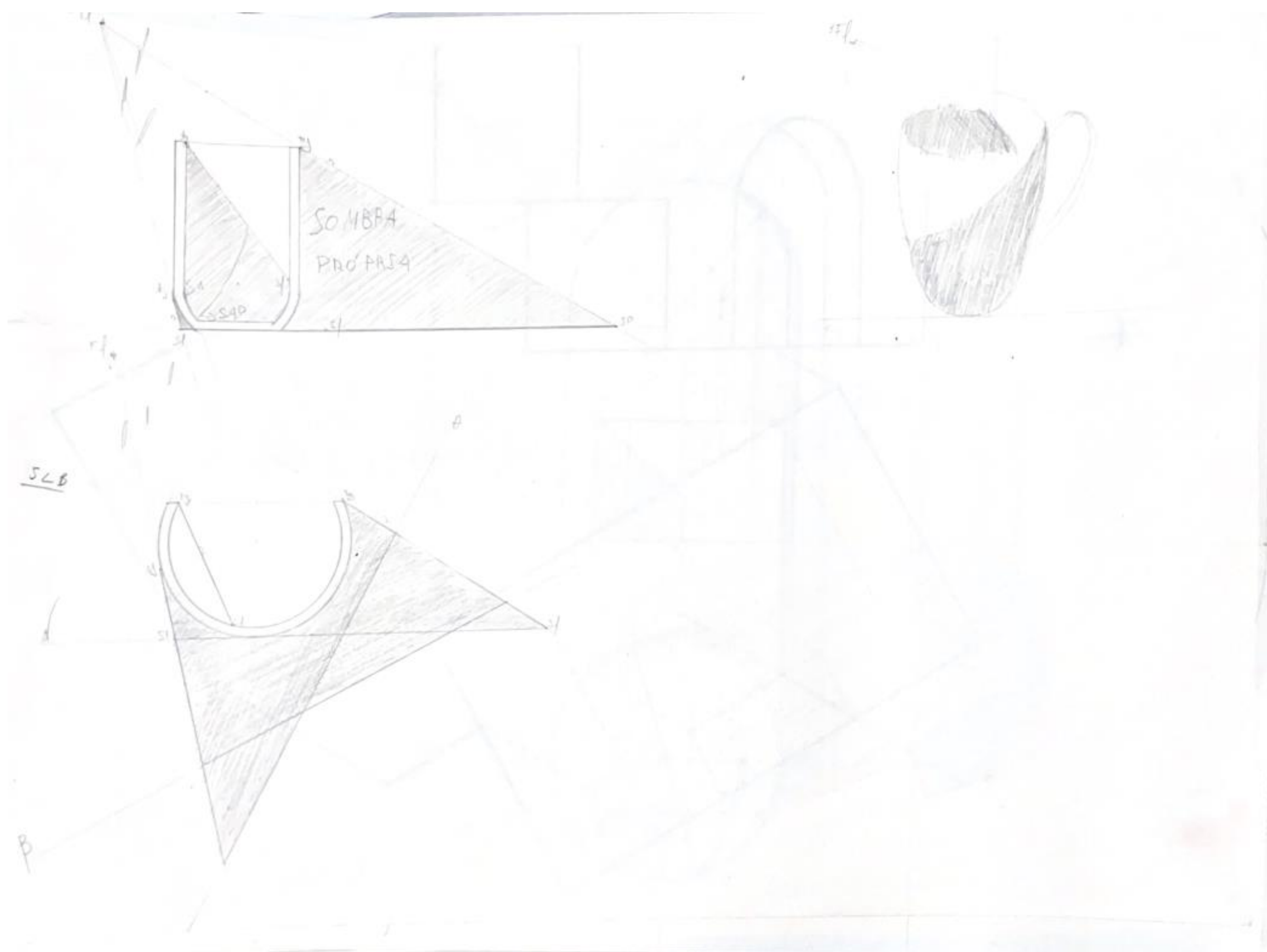


Aula 15 – Sombras

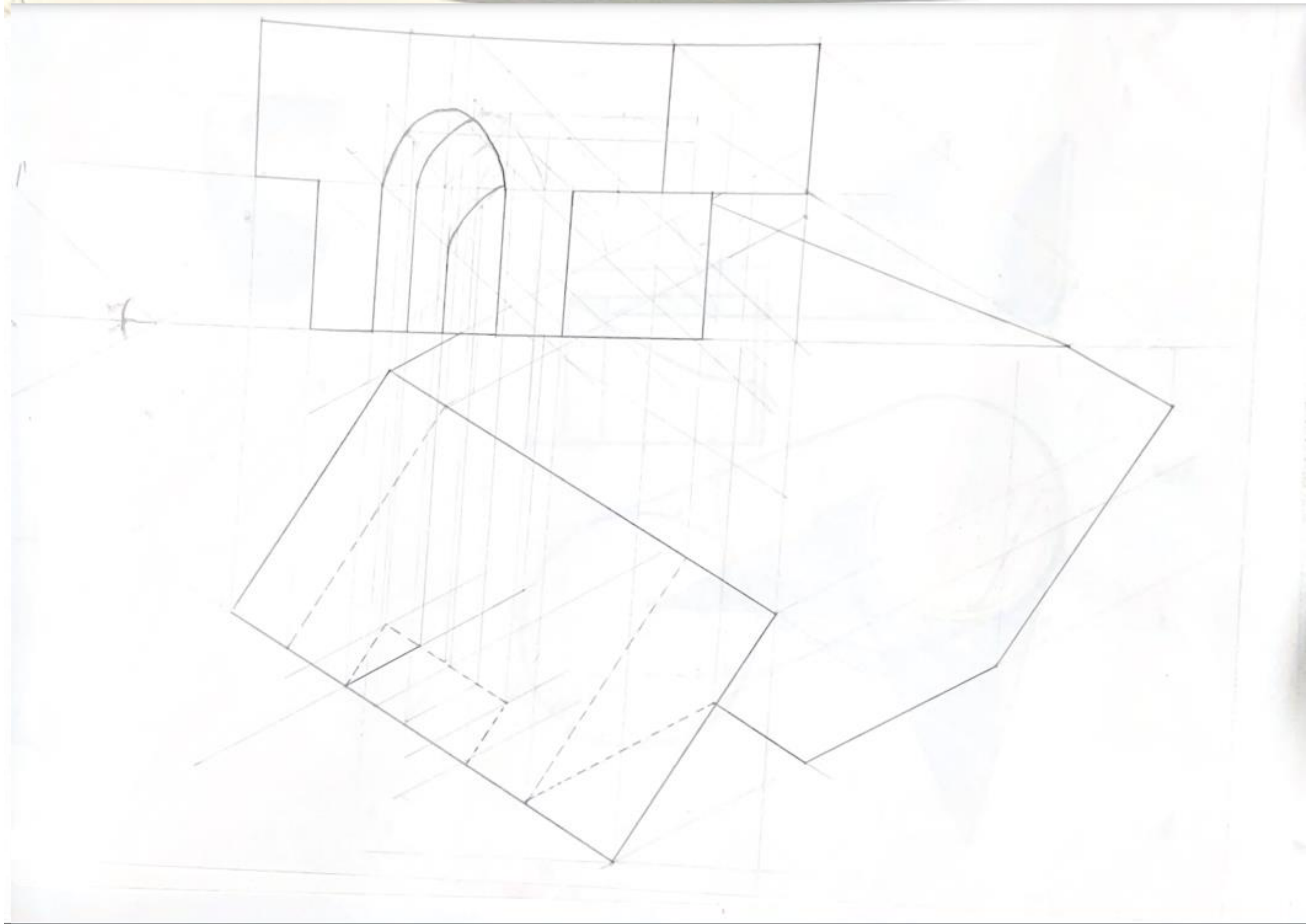
1) Método das Planos Auxiliares



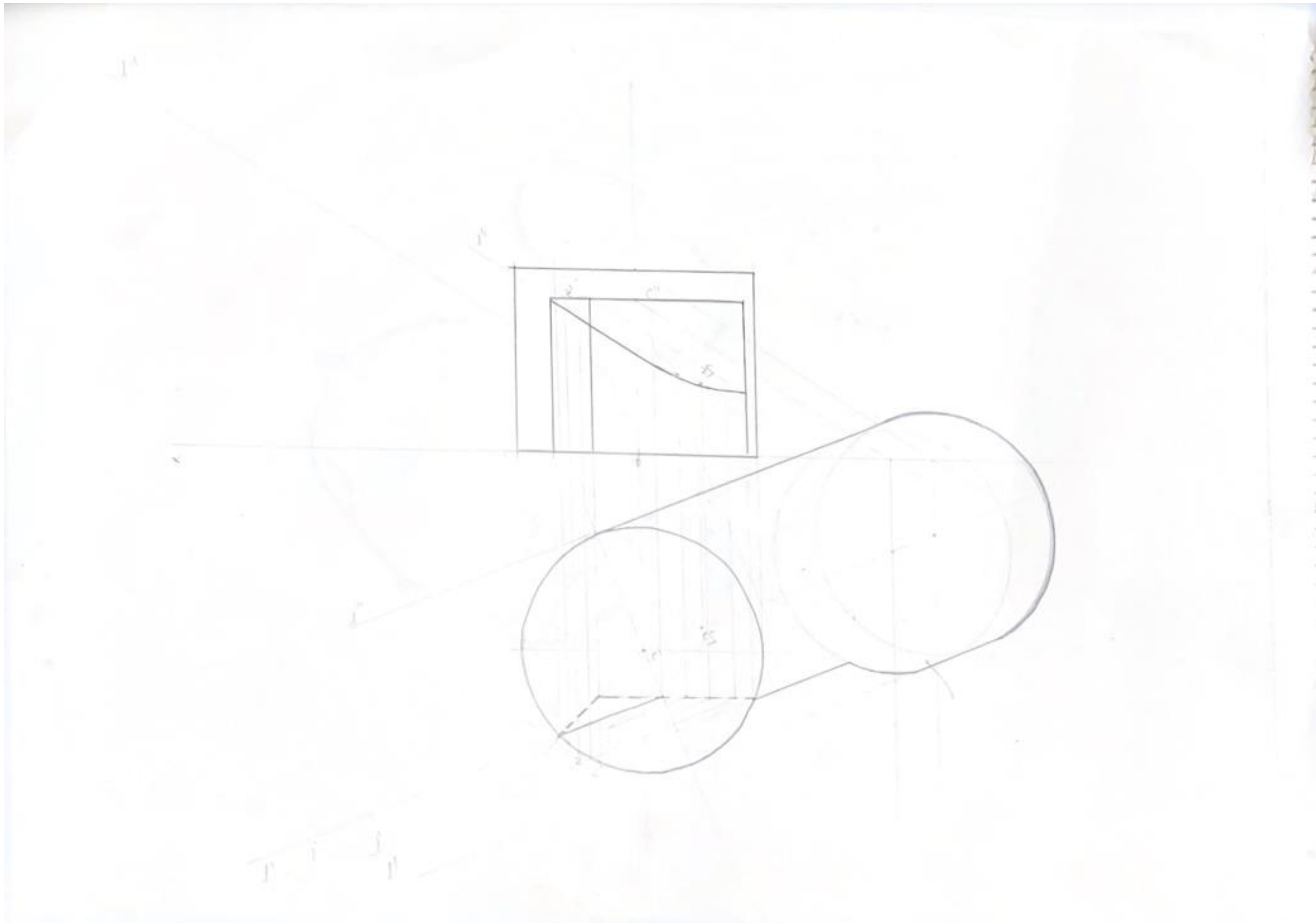
Aula 16 – Sombras



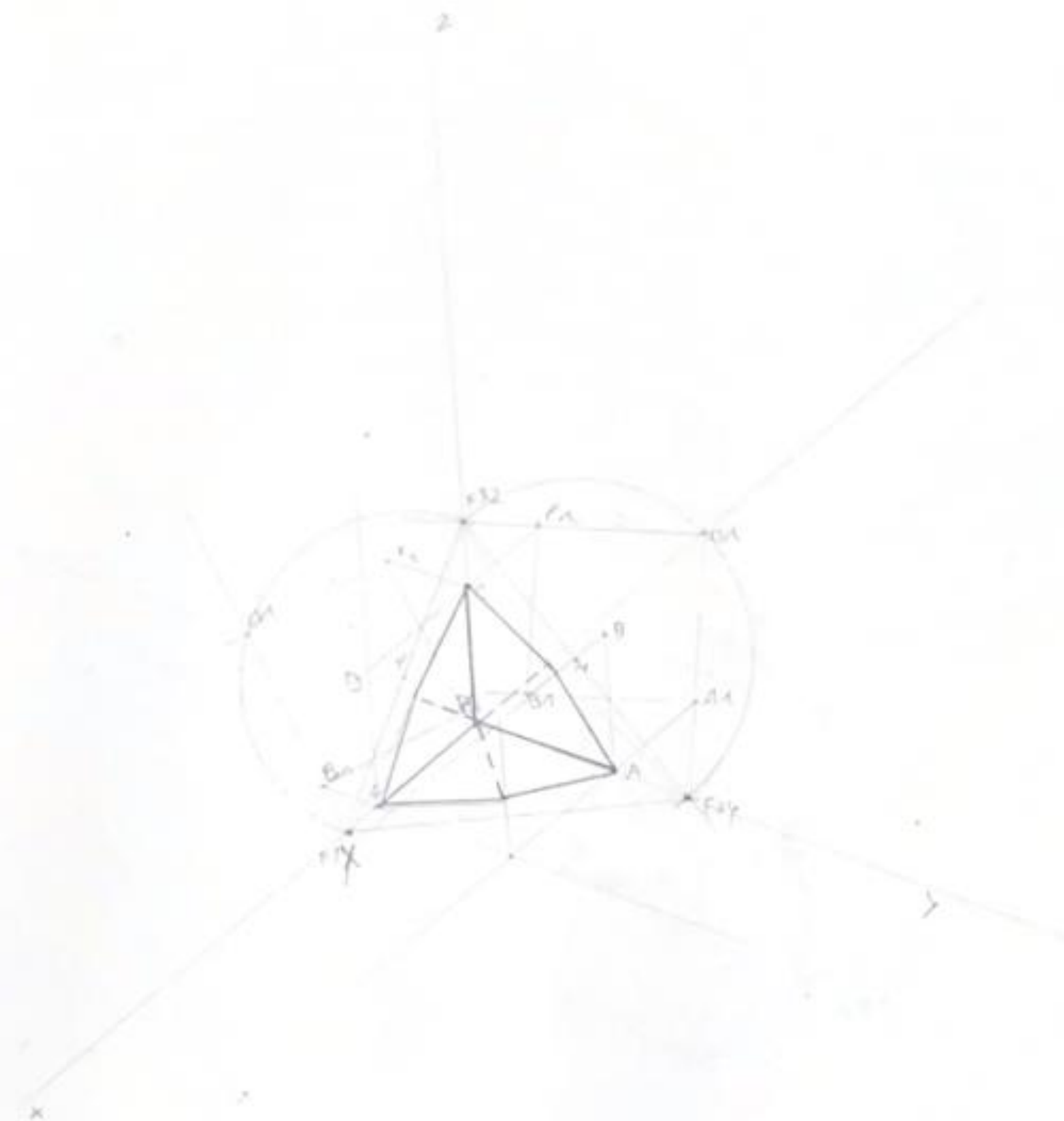
Aula 17 – Sombras



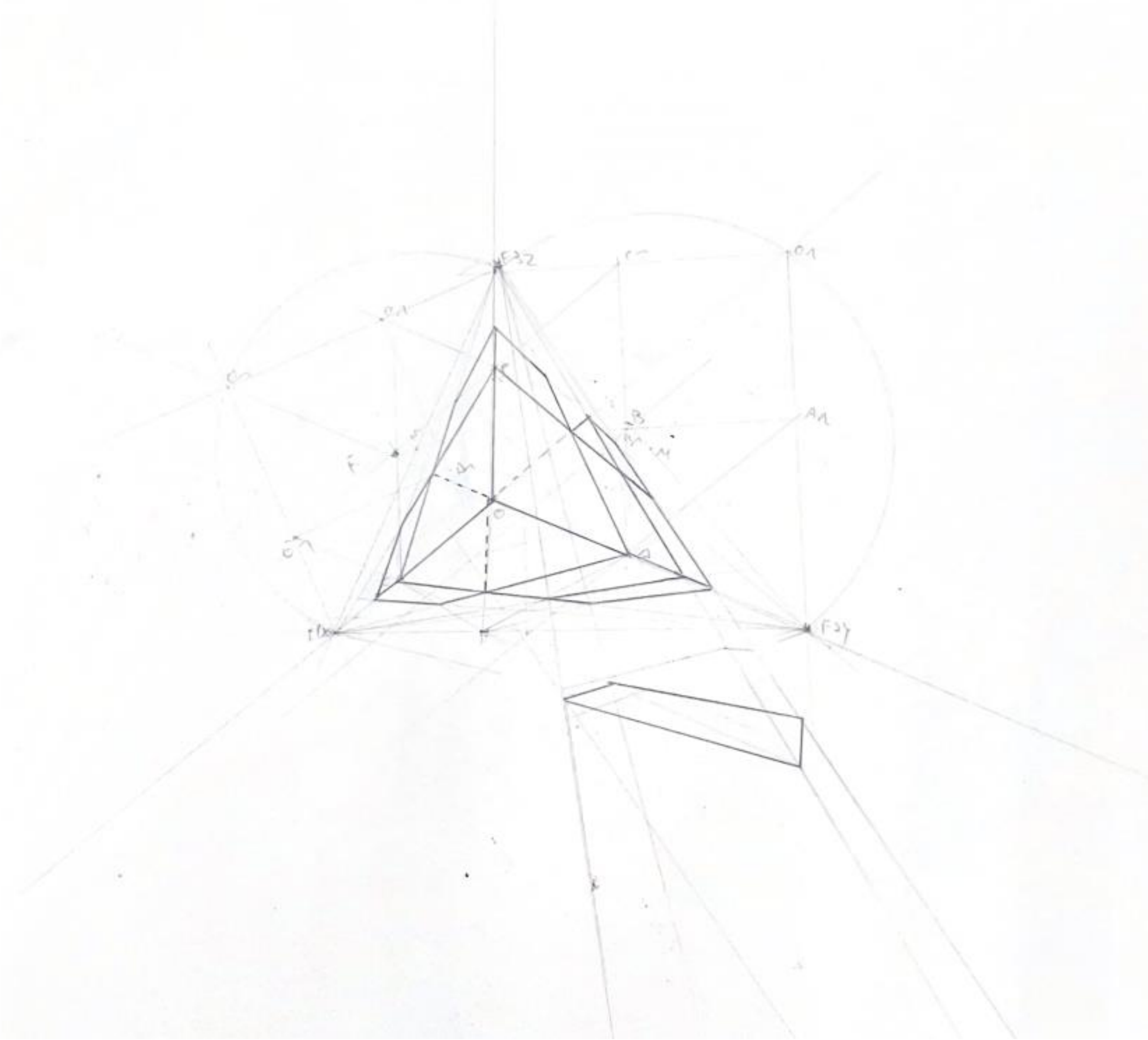
Exerc. 17.1 – Luz e sombra



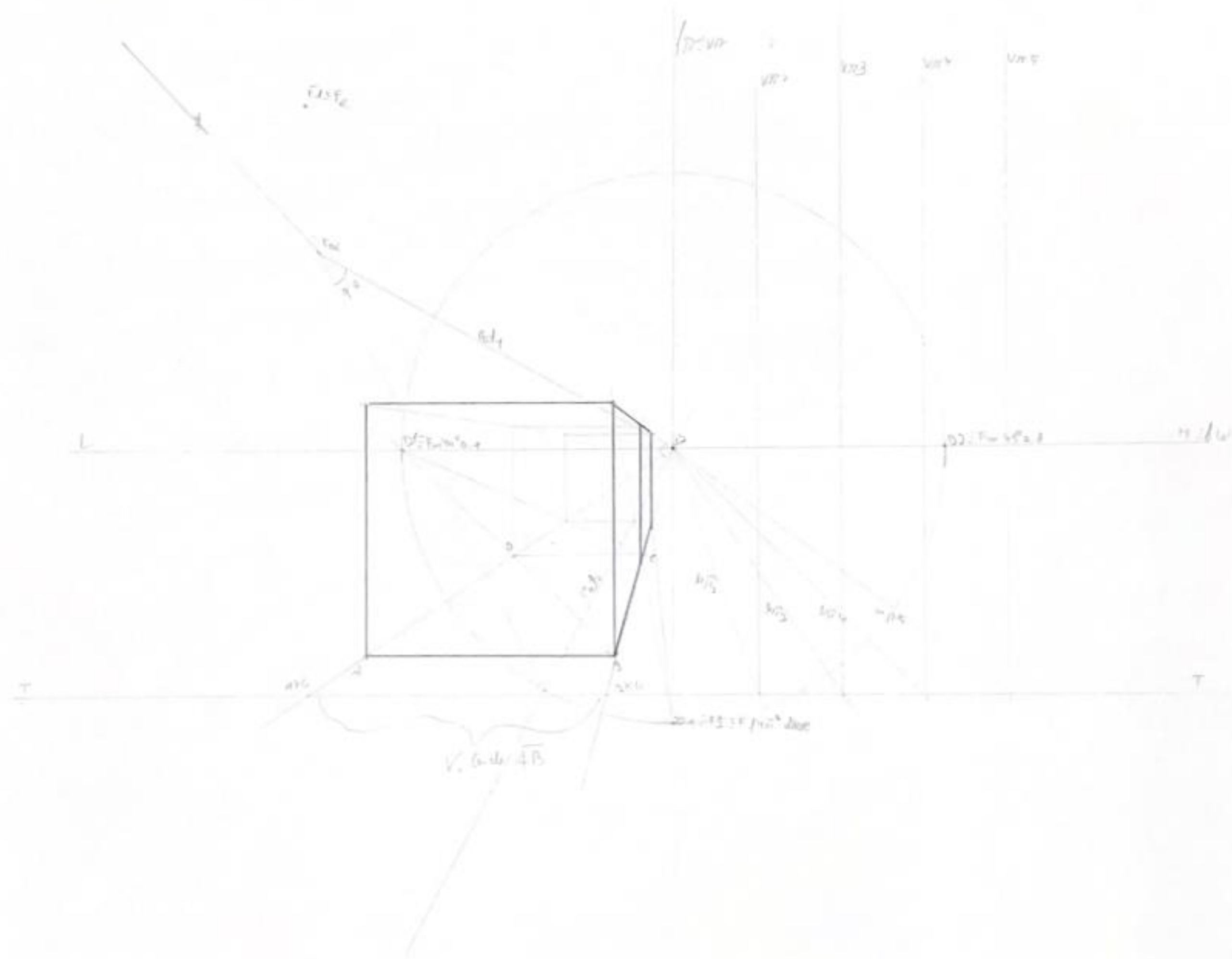
Aula 18 – Sombras e Luz



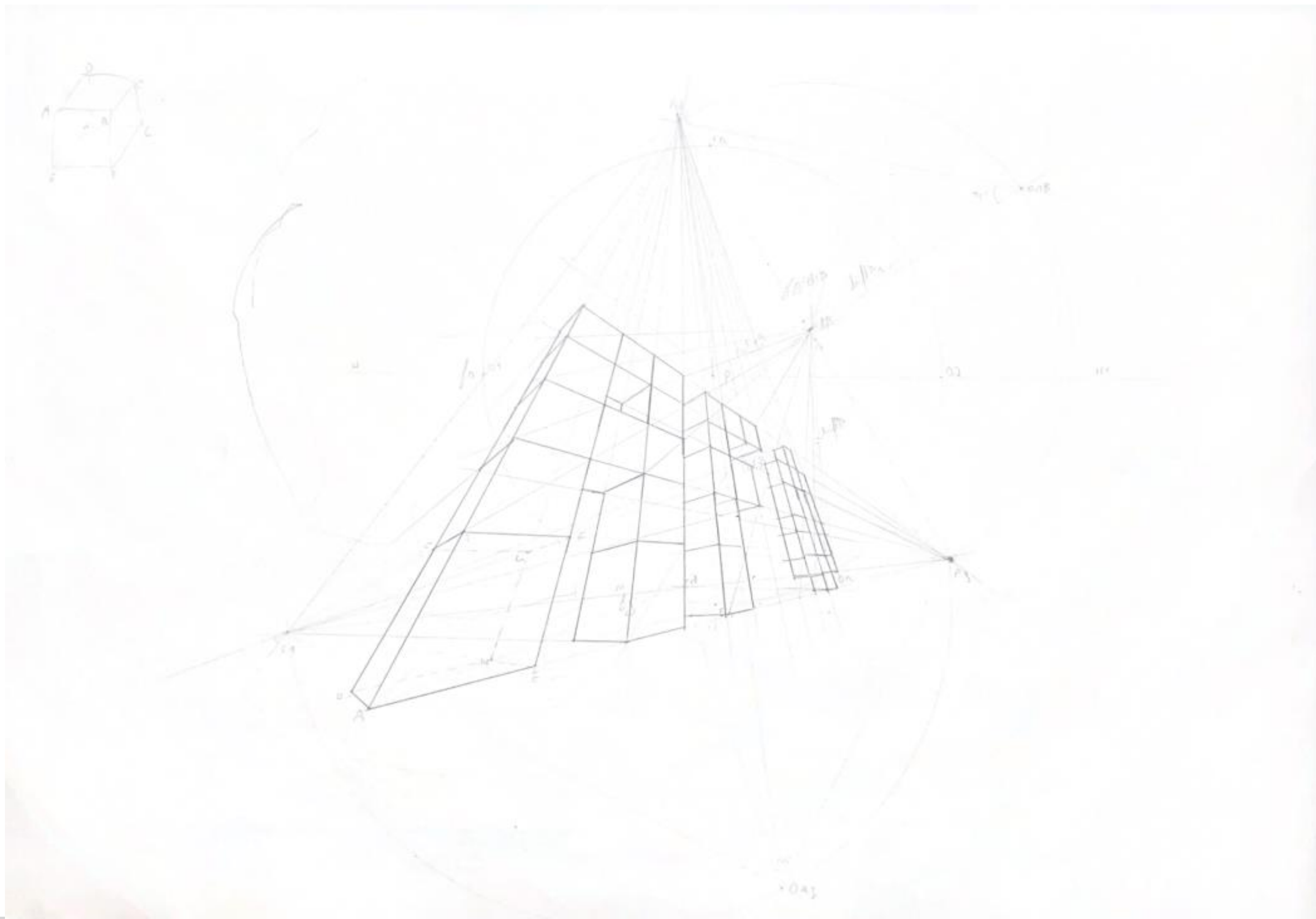
Aula 19 – Perspetiva



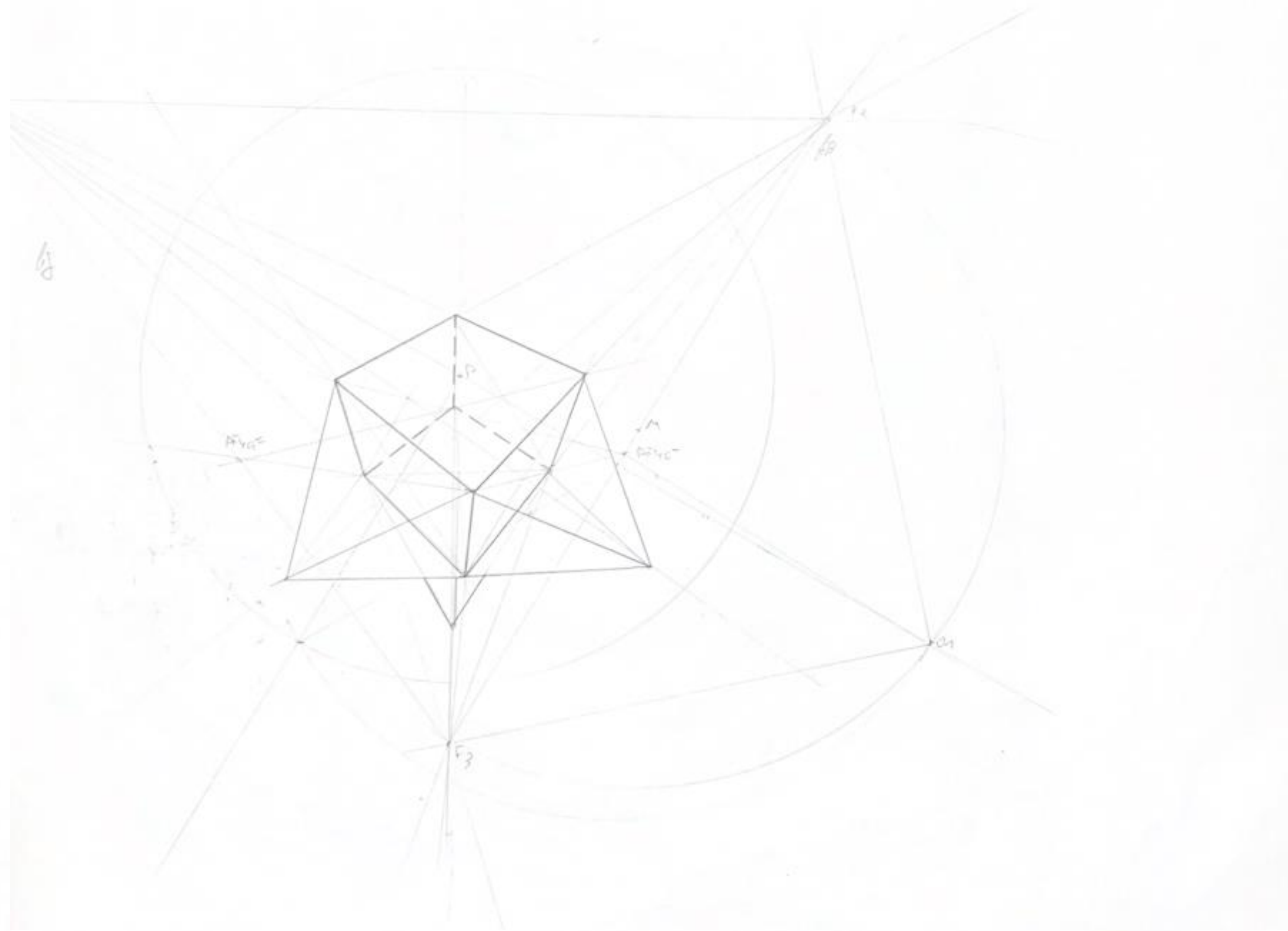
Aula 20 – Perspetiva



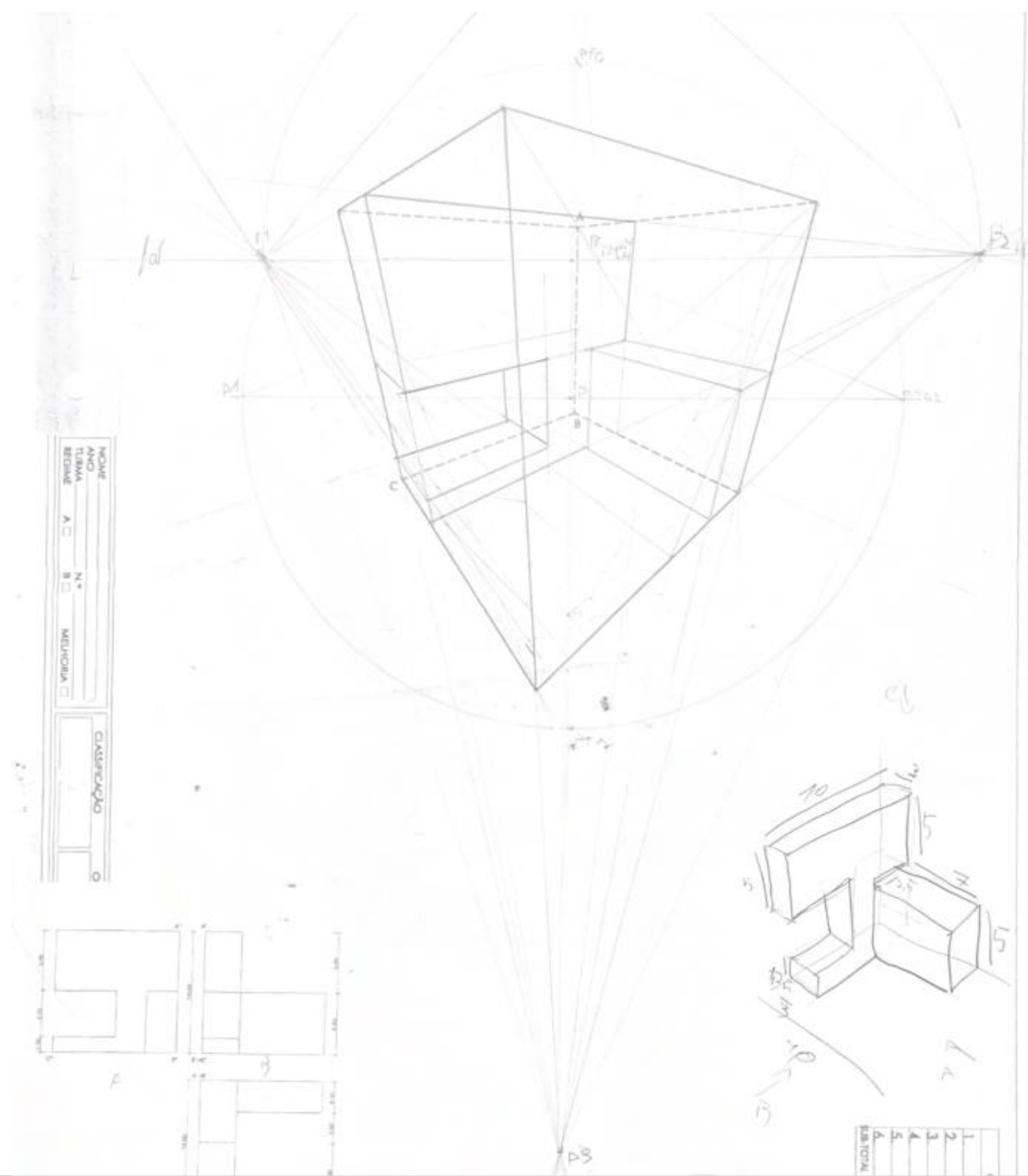
Aula 21 – Perspetiva



Exerc. 21.1 – Perspetiva



Aula. 22 – Perspetiva



Exerc. 23 – Perspetiva



Exerc. 24 – Perspetiva