

Representação Digital

2023-2024



UNIVERSIDADE
DE LISBOA



FACULDADE DE ARQUITETURA
UNIVERSIDADE DE LISBOA

Mestrado Integrado em Arquitectura
Ano Lectivo 2023-2024 1º Semestre
Docente - Nuno Alão 2º Ano

20221327



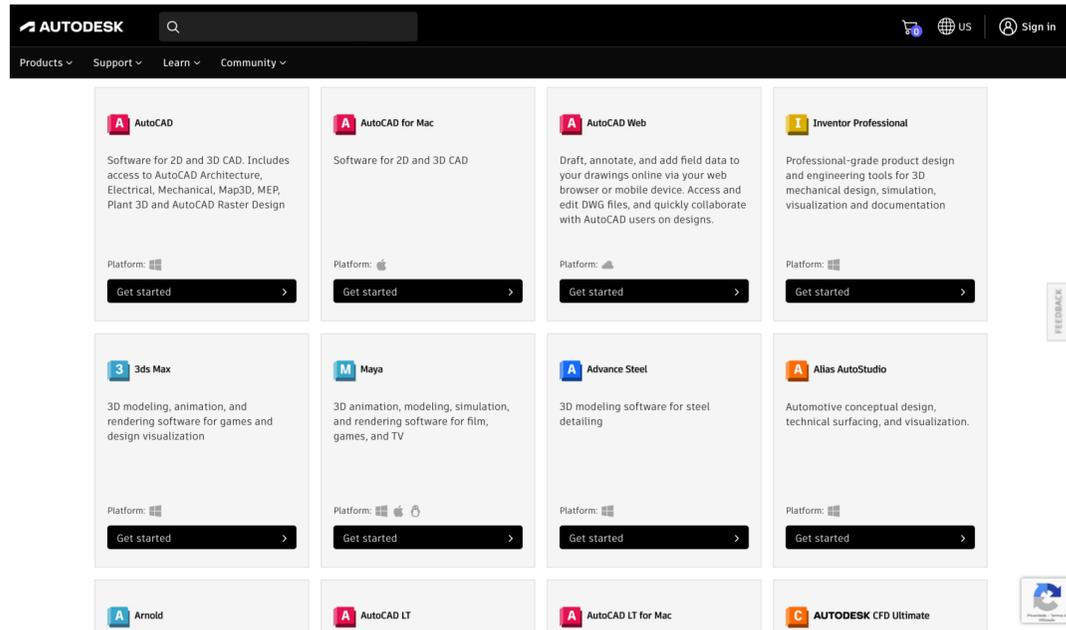
Tiago Lopes

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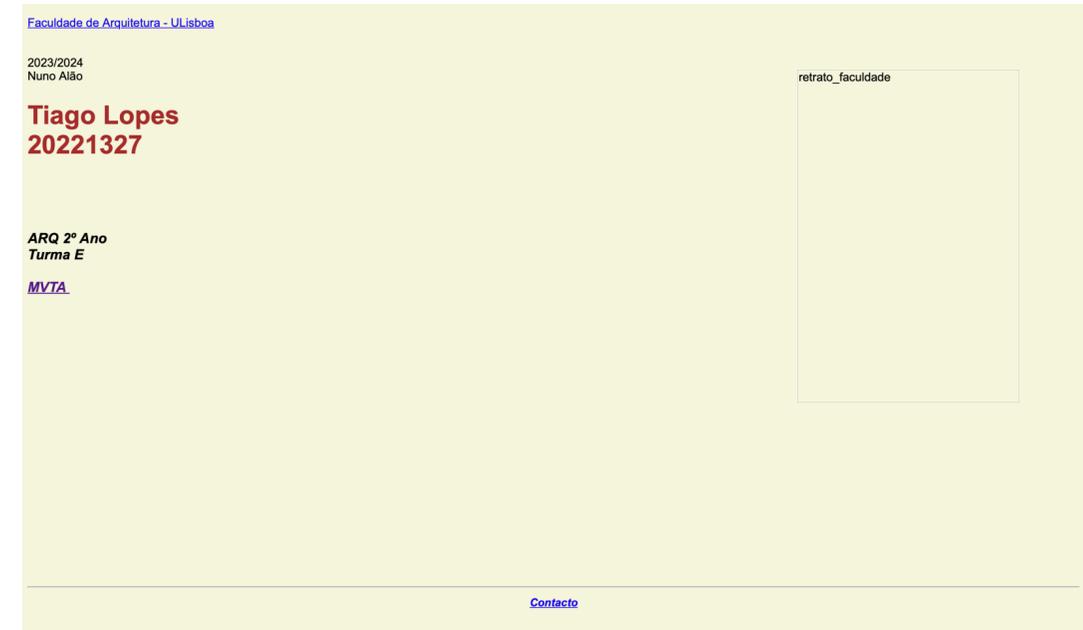
Slide n.

- 02 Descrição do aluno
- 04 Aula 1
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- 04-12 Aula 3 até 12
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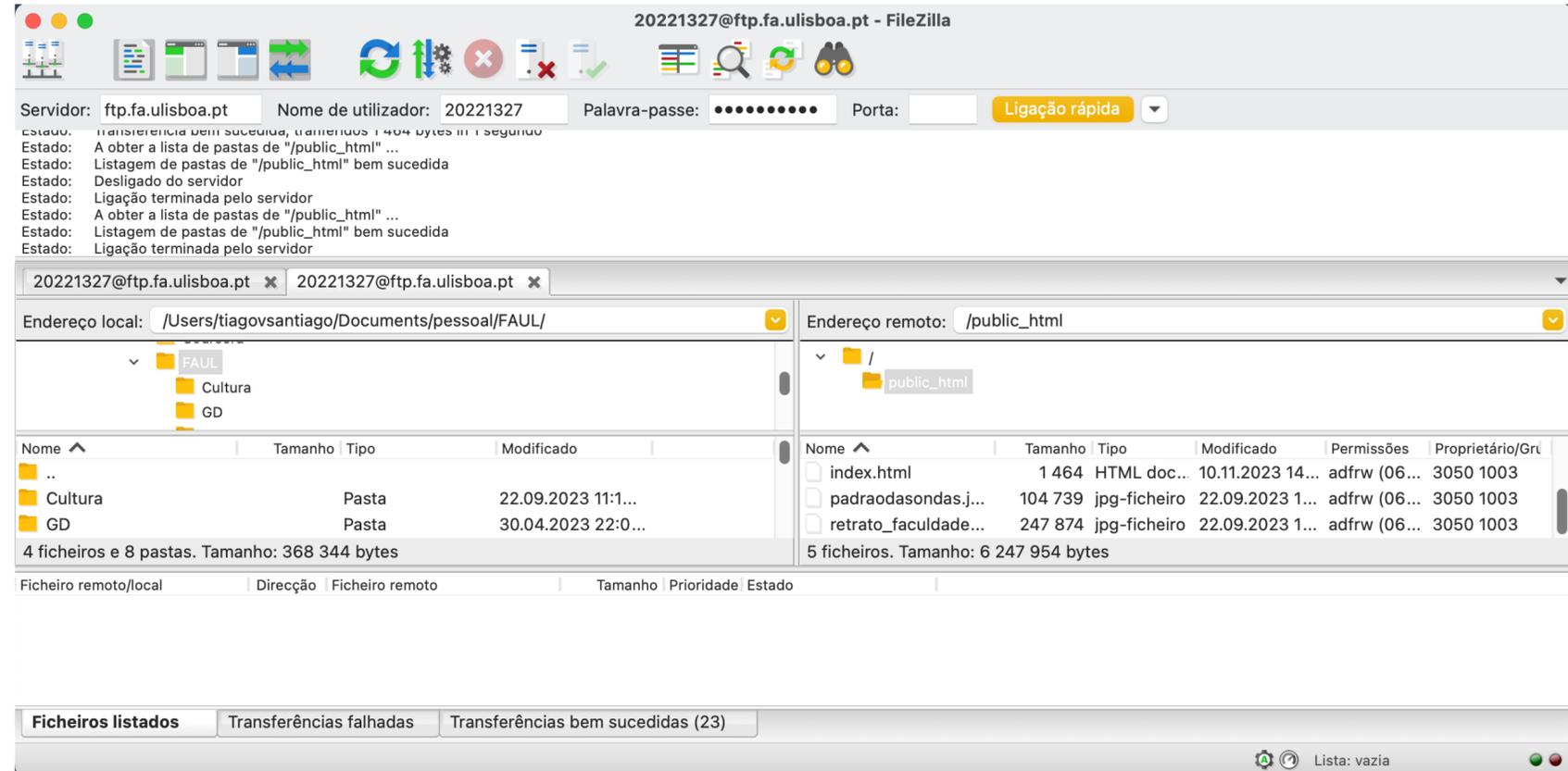
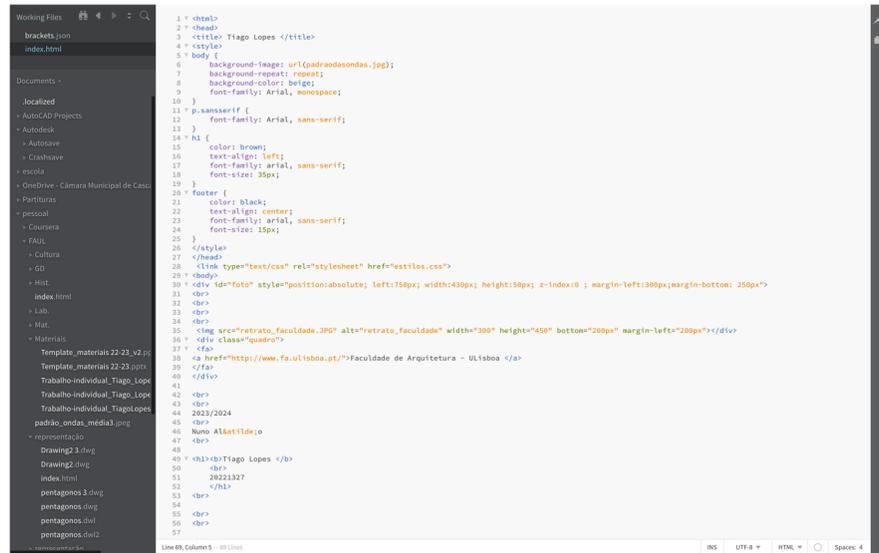
- Criámos conta Autodesk e Instalá-mos Autocad

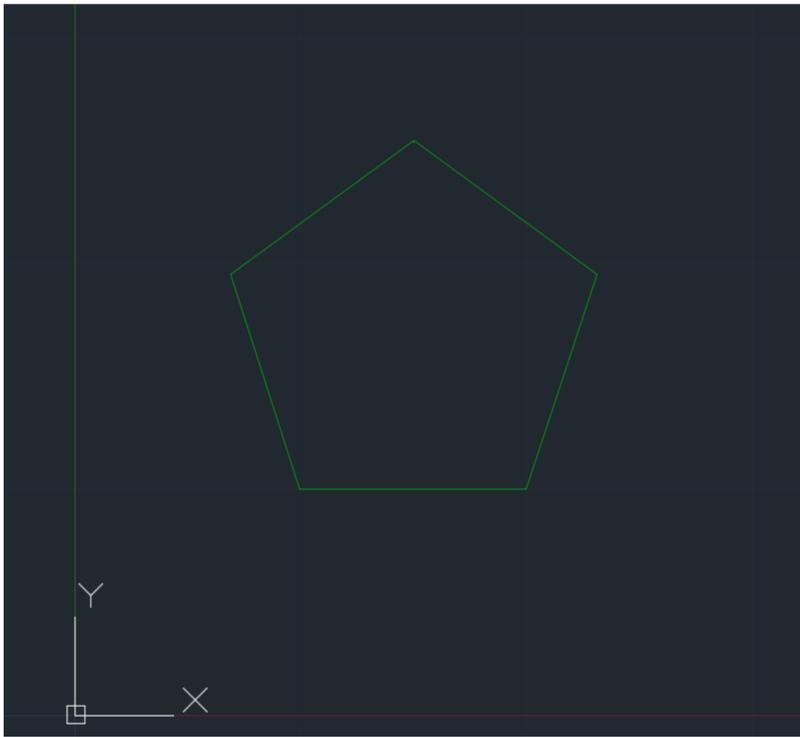


- Criá-mos página html para pôr no blog do professor
- Utilizamos o filezilla

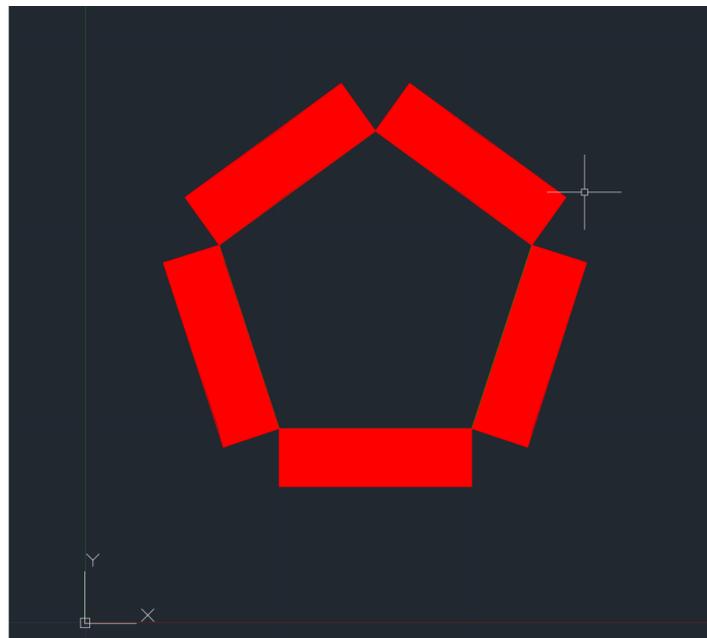


- Instalei brackets para codificar a pagina html
 - Aprendemos a codificar a página





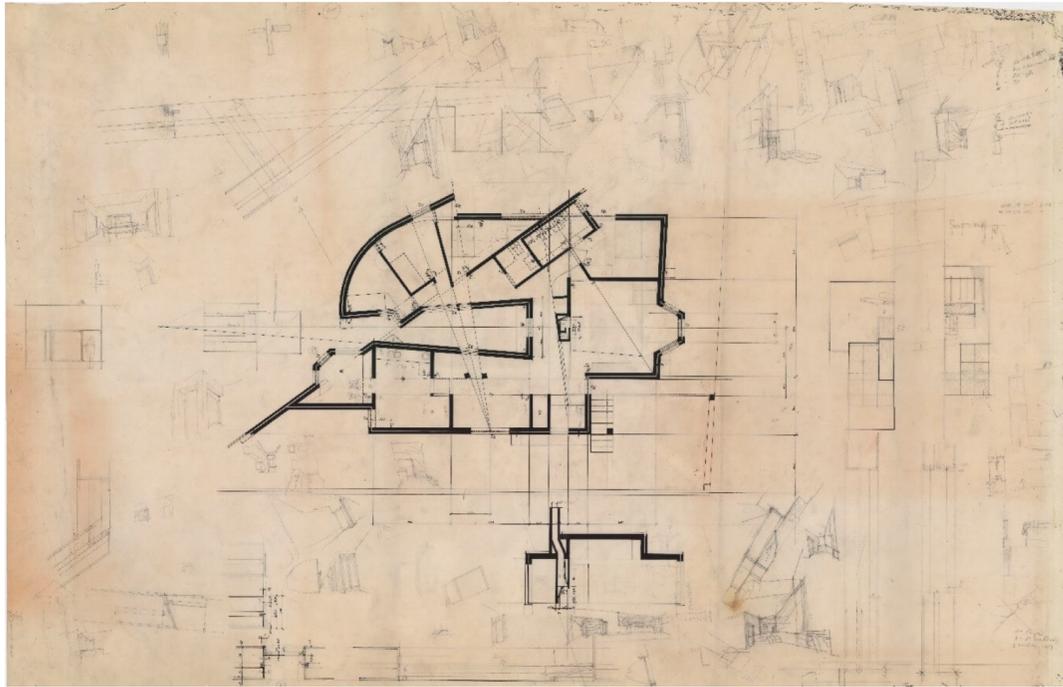
- Criamos um pentágono através do comando line, e com pontos relativos: $@(dist)<(\text{âng})$
- Primeiro ponto (10,10)
- Segundo ponto $@10<0^\circ$
- Terceiro ponto $@10<72^\circ$
- Quarto ponto $@10<144^\circ$
- Quinto ponto $@10<-144^\circ$
- Unir com o primeiro ponto



- No final, usamos o comando “move” e “rotate” para por os retangulos nos lados do pentágono



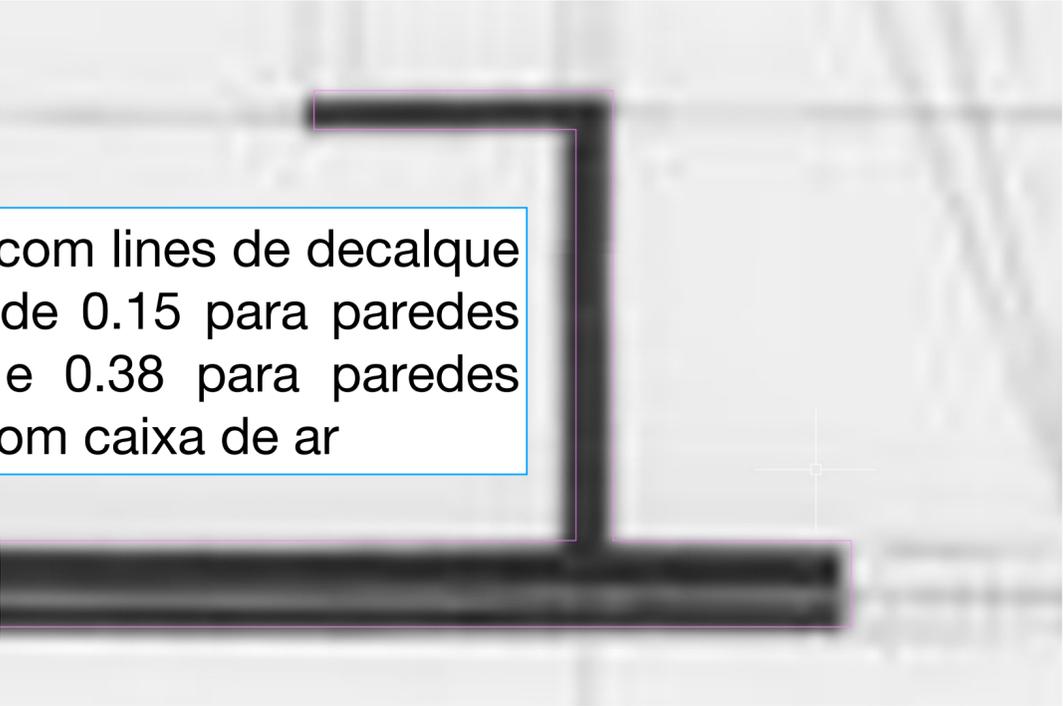
- Fizemos retângulos com 10 de comprimento e 3 de altura
- Preenchemos os retângulos com o comando “hatch” sólido
- Seleccionámos todos os lados do retangulo + hatch e fizemos o comando “group”



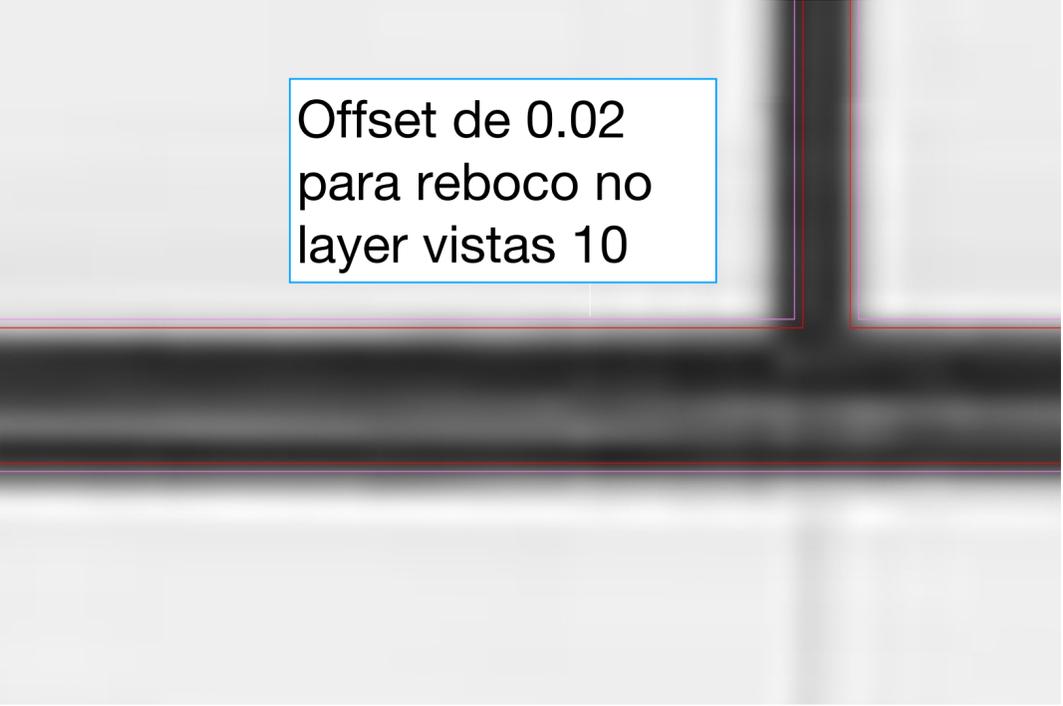
- Primeiro abrimos um novo ficheiro
- Criámos várias layers
- Importámos a planta de uma casa do Siza Vieira para o autocad e escalámos a imagem.
- Depois iniciámos o decalque

Comandos:

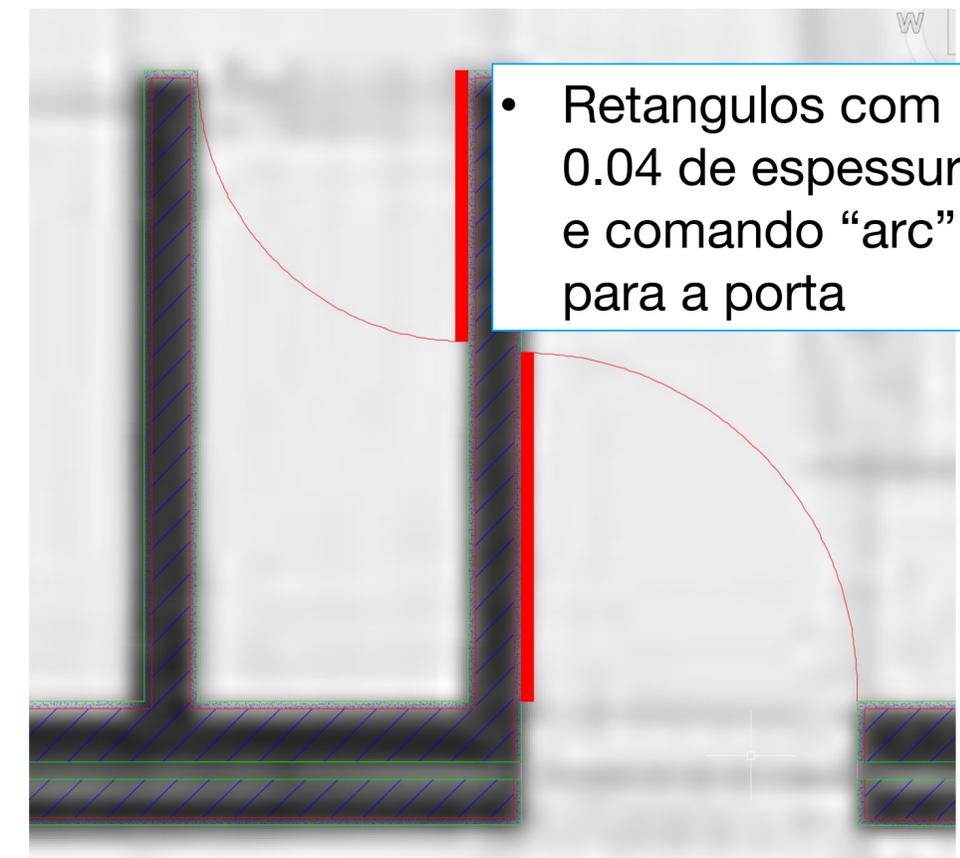
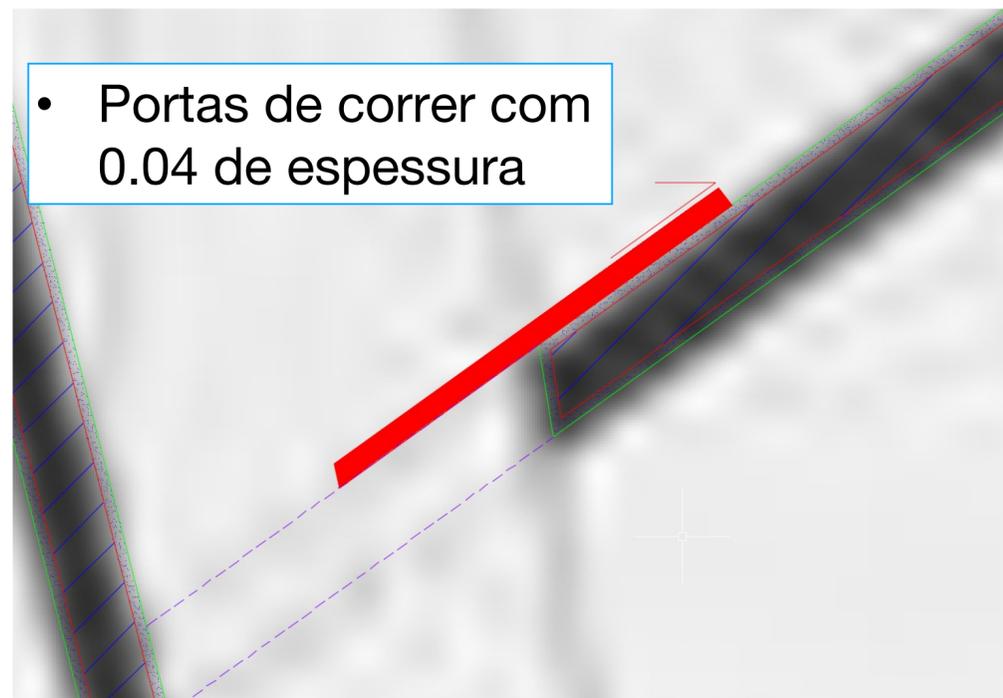
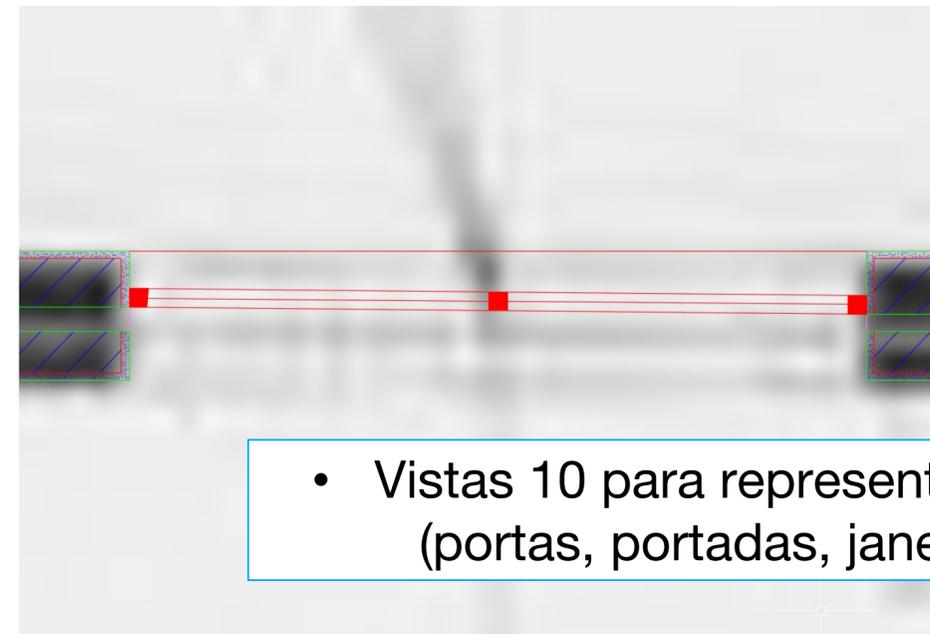
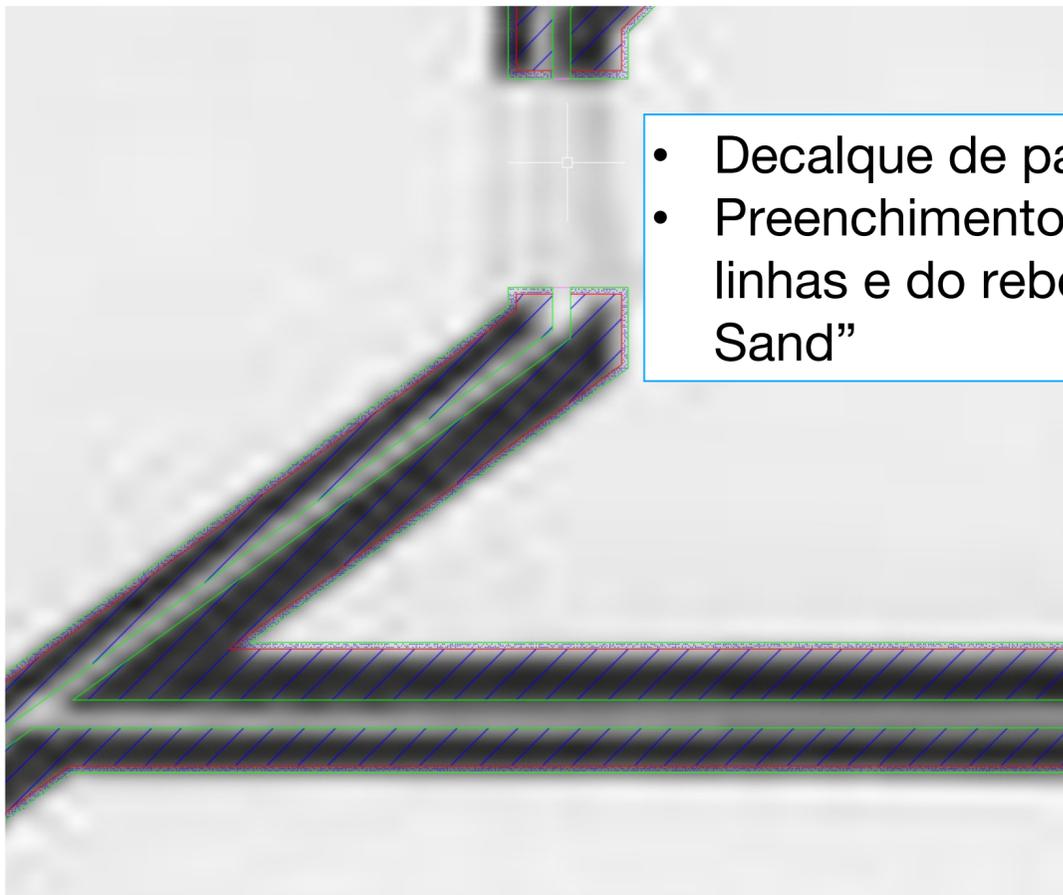
- Line
- Offset
- Dist
- Fillet
- Scale
- Trim
- Extend
- Rotate
- Copy
- Hatch
- Move
- Align

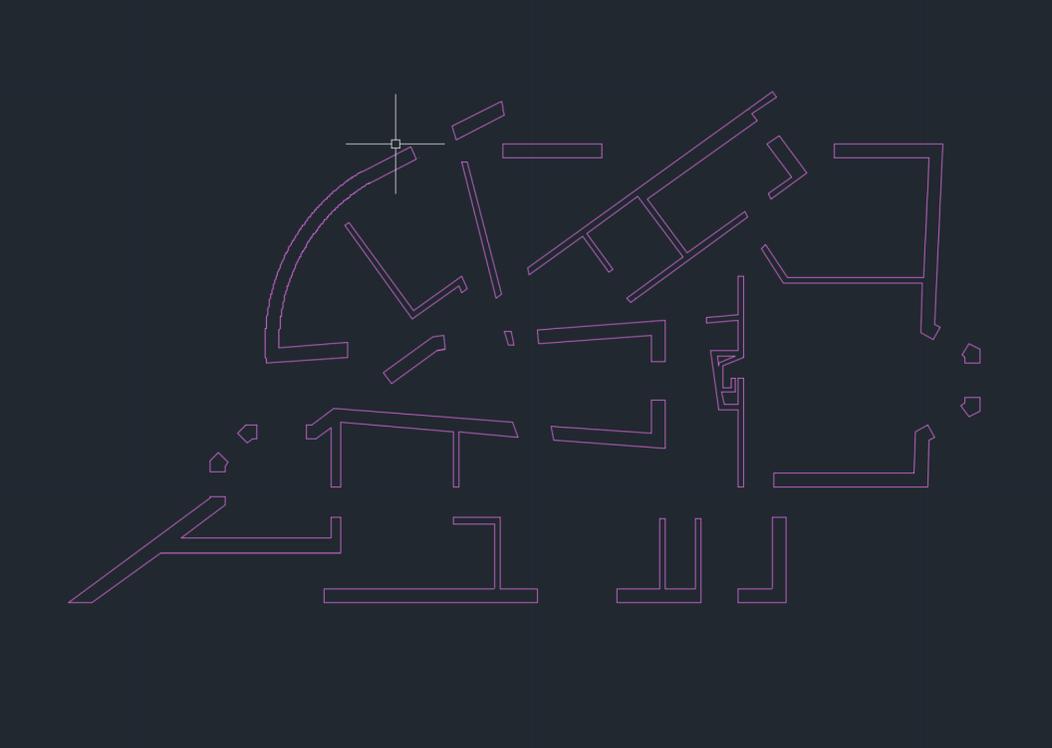


Orto-on com lines de decalque e offset de 0.15 para paredes simples e 0.38 para paredes duplas com caixa de ar

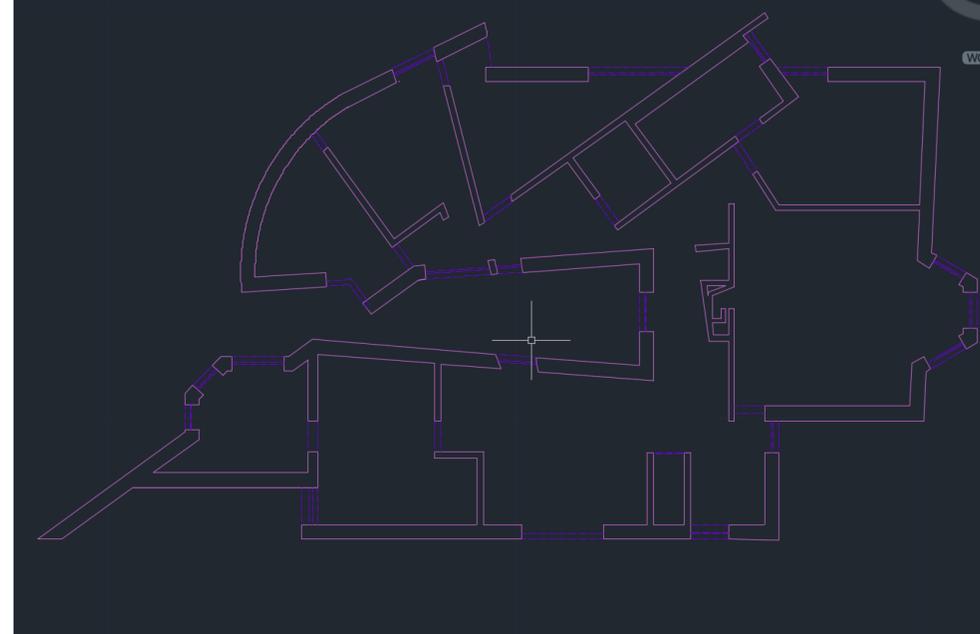


Offset de 0.02 para reboco no layer vistas 10

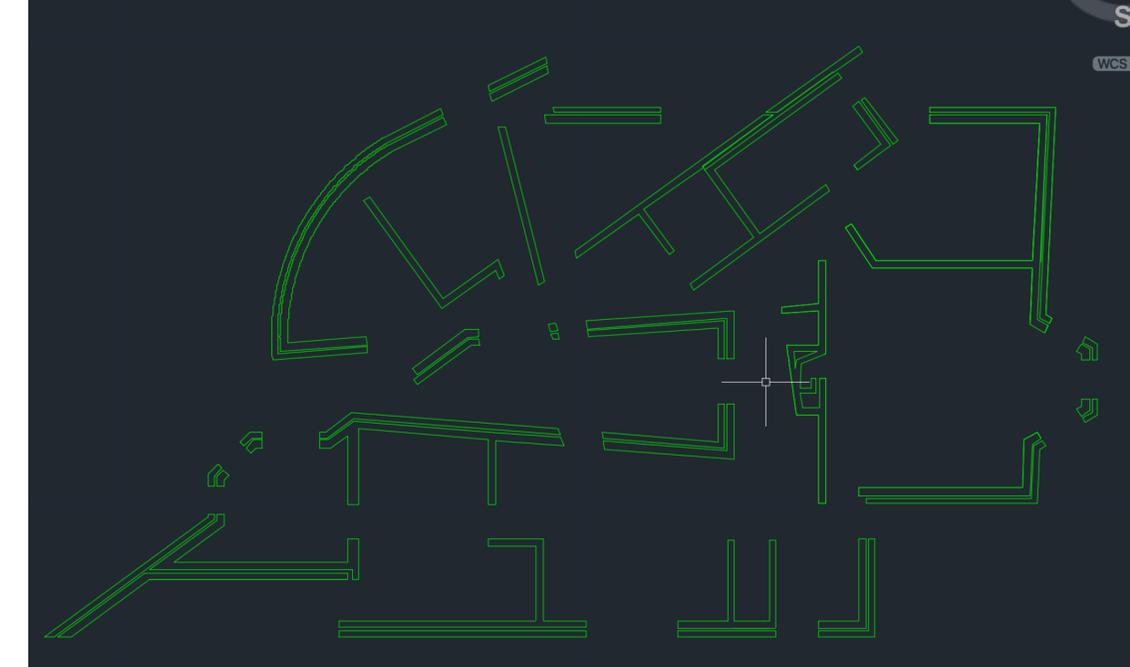




- Paredes 100 (só o contorno)



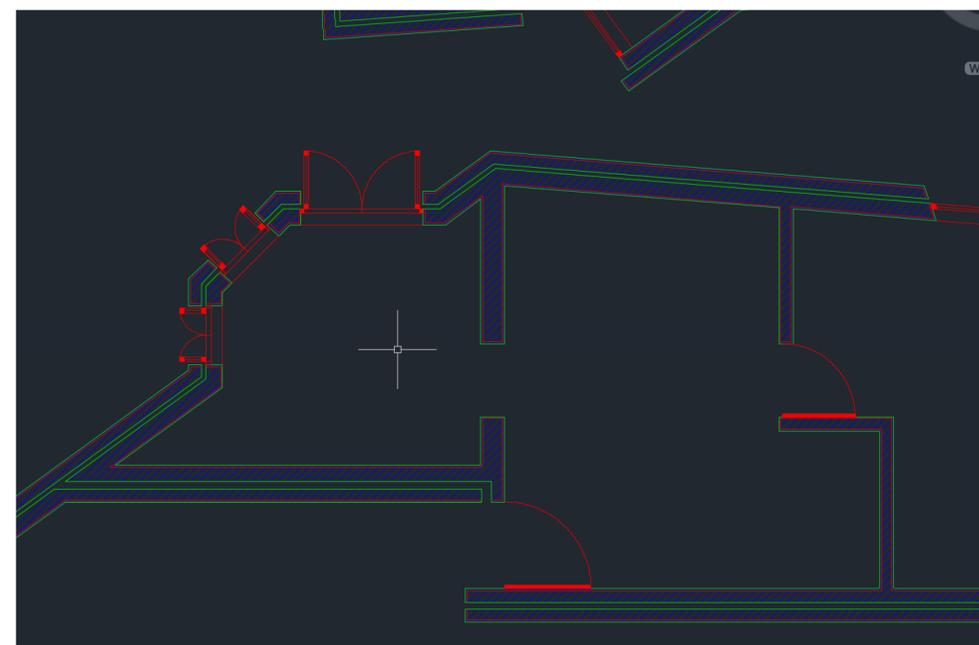
- Paredes 100 + invisibilidades



- Paredes 10 (caixa de ar)



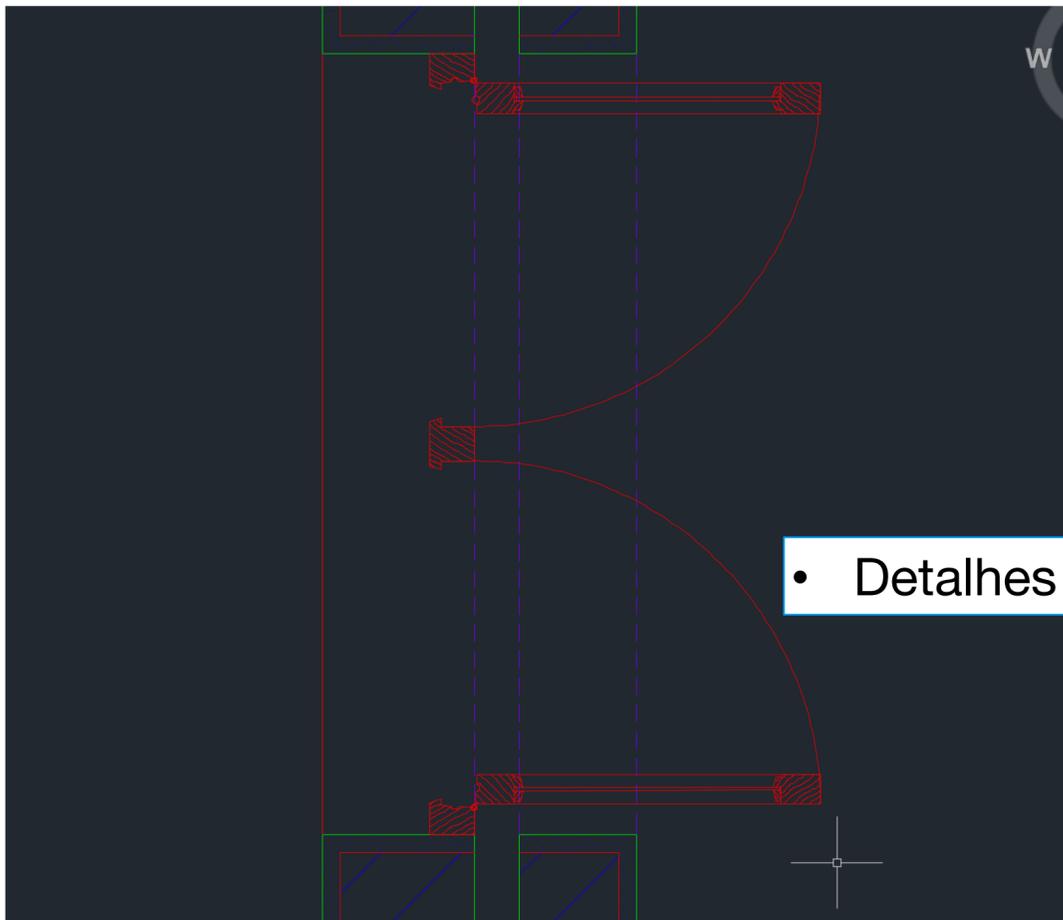
- Vistas 10 + paredes 10



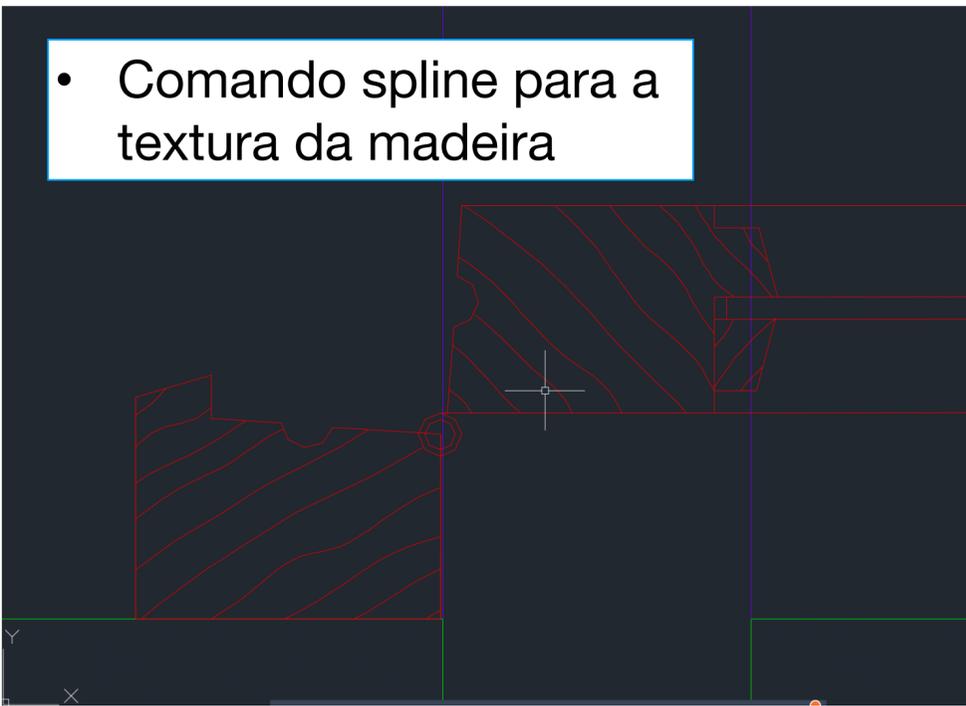
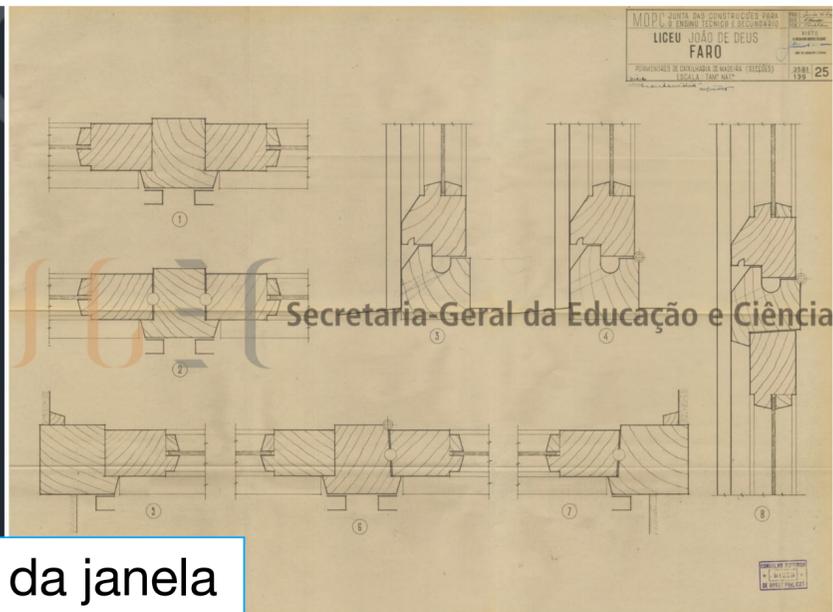
- Vistas 10 + paredes 10 + hatch

ReDig

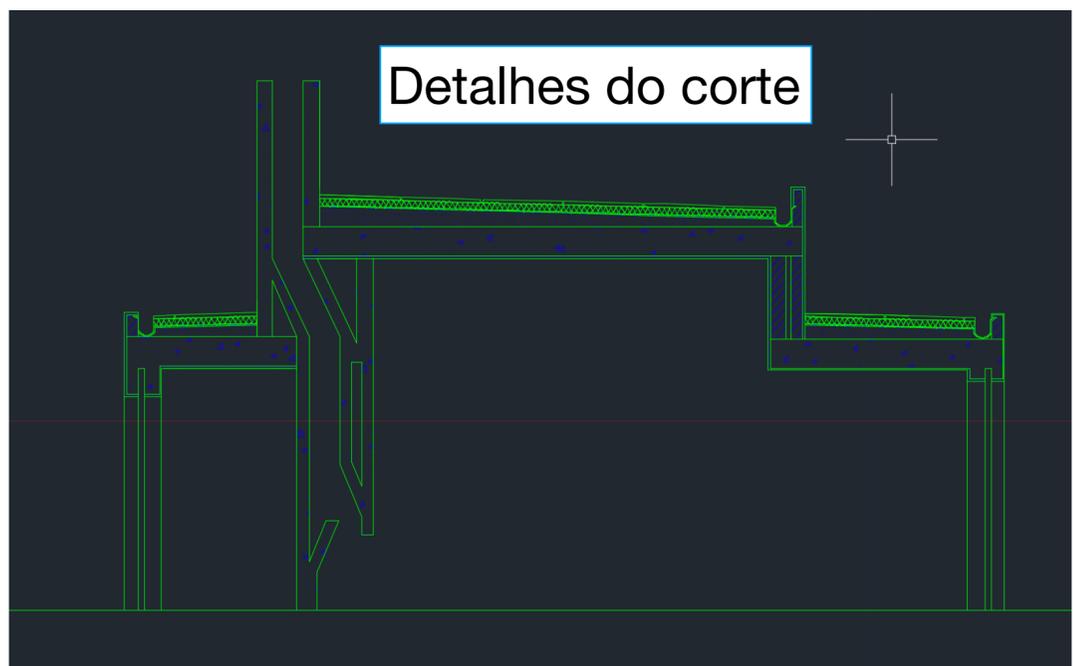
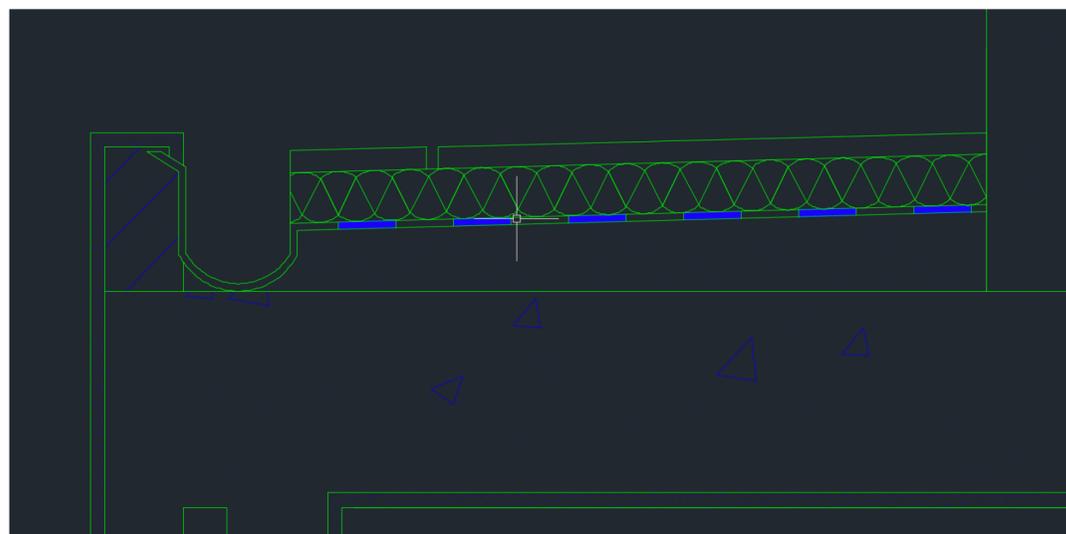
Aula 3 até 12 – 26/09 até 27/11



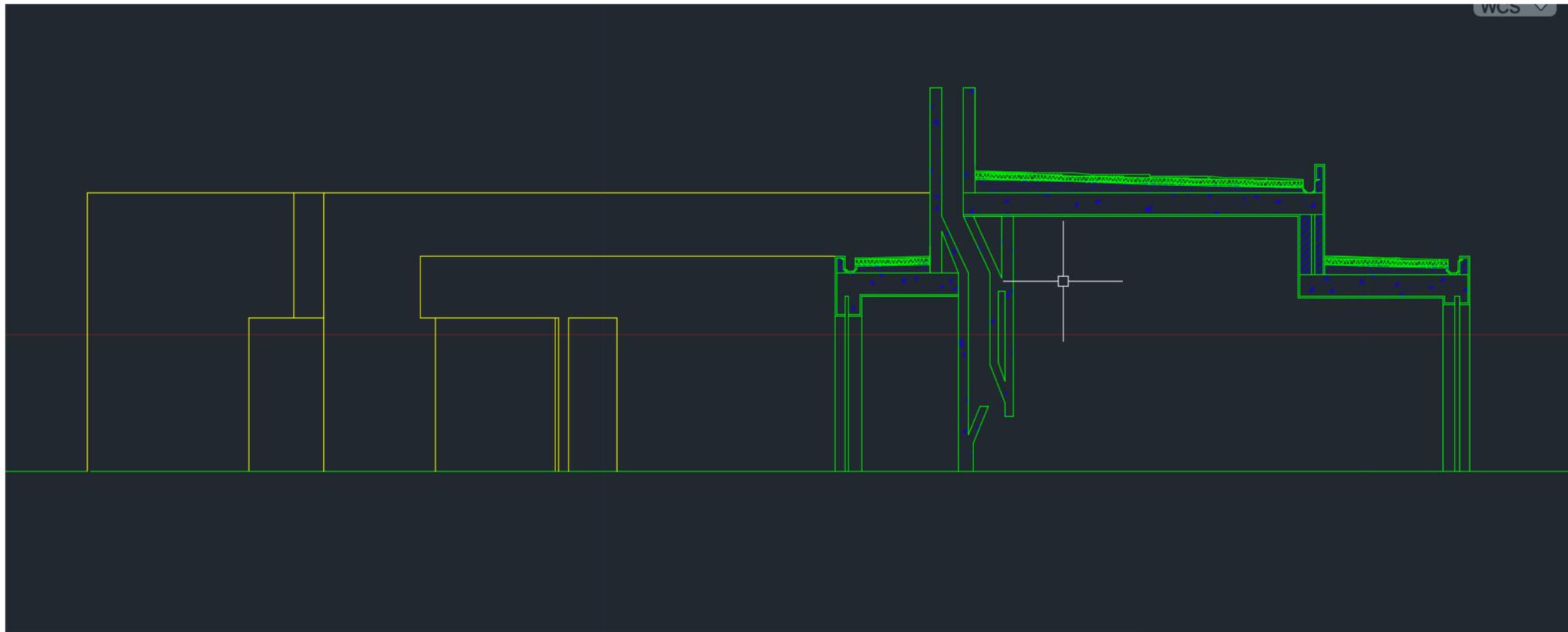
- Detalhes da janela



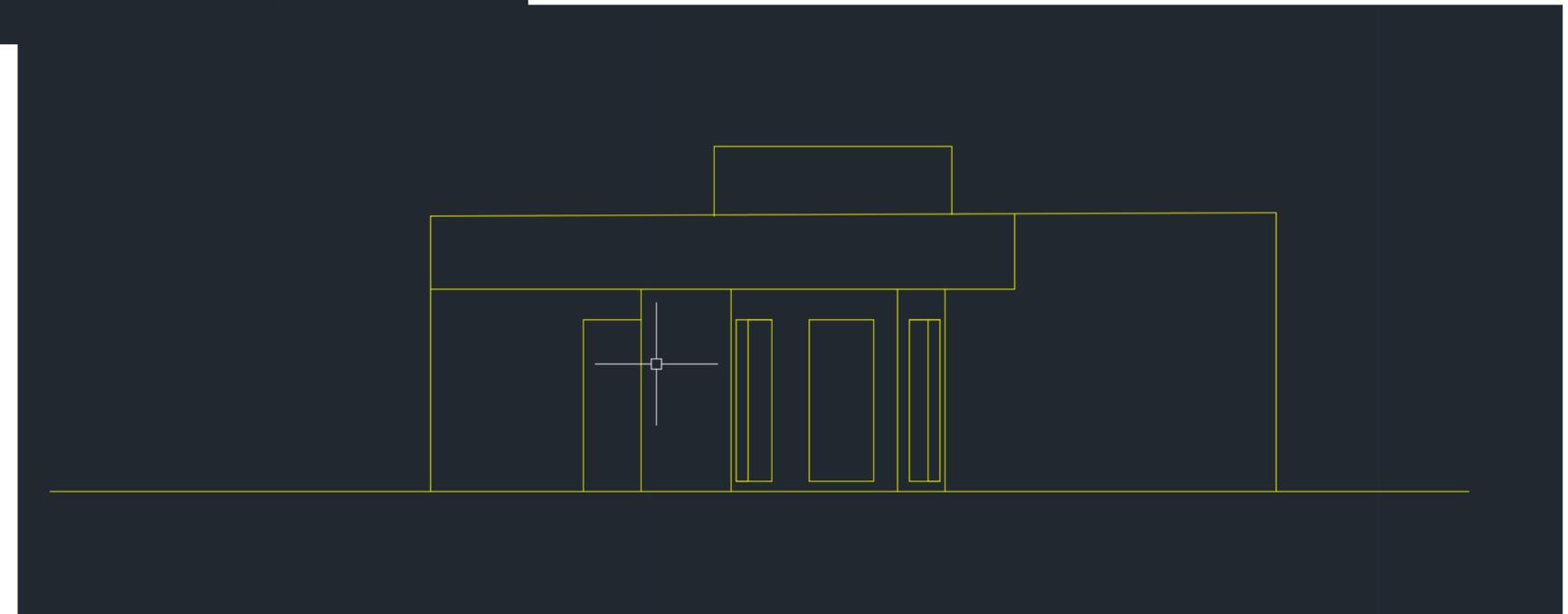
- Comando spline para a textura da madeira



- Detalhes do corte



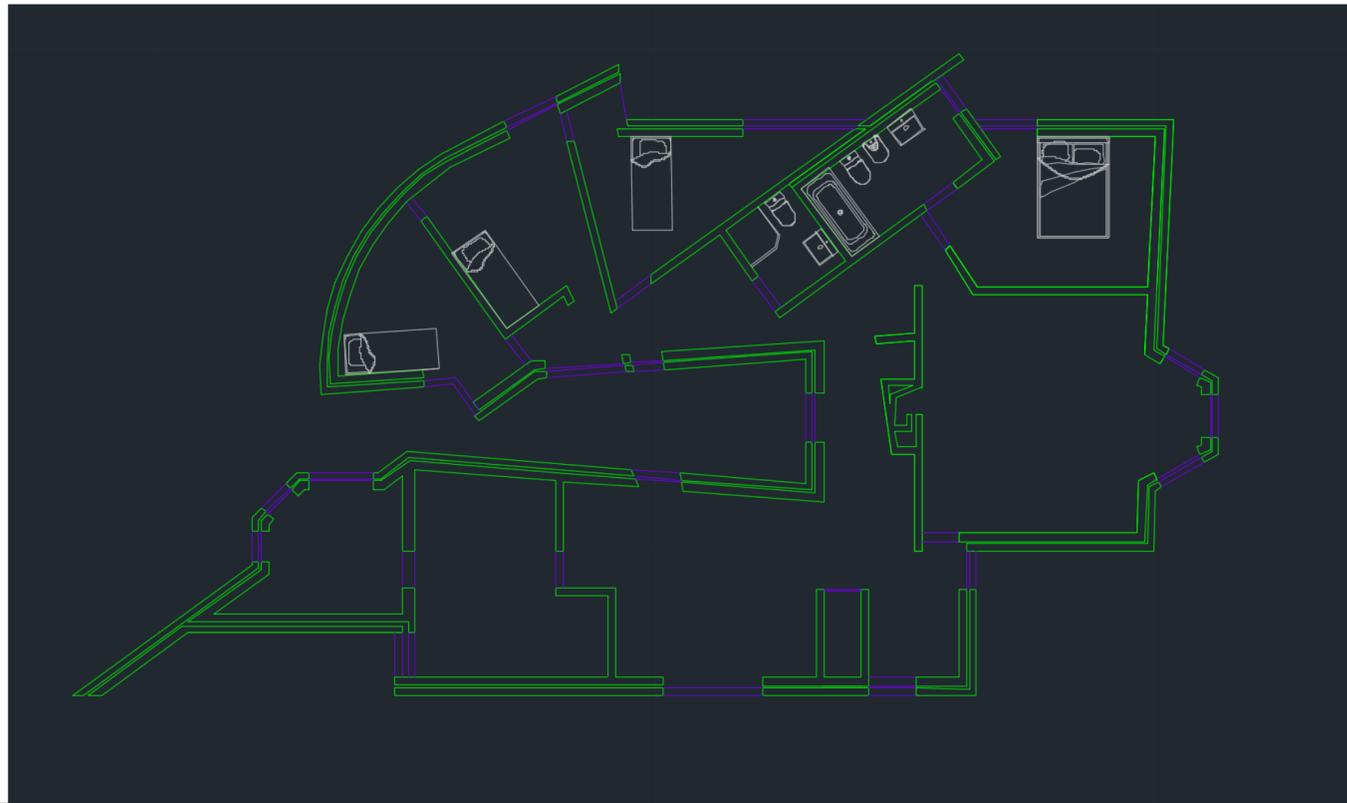
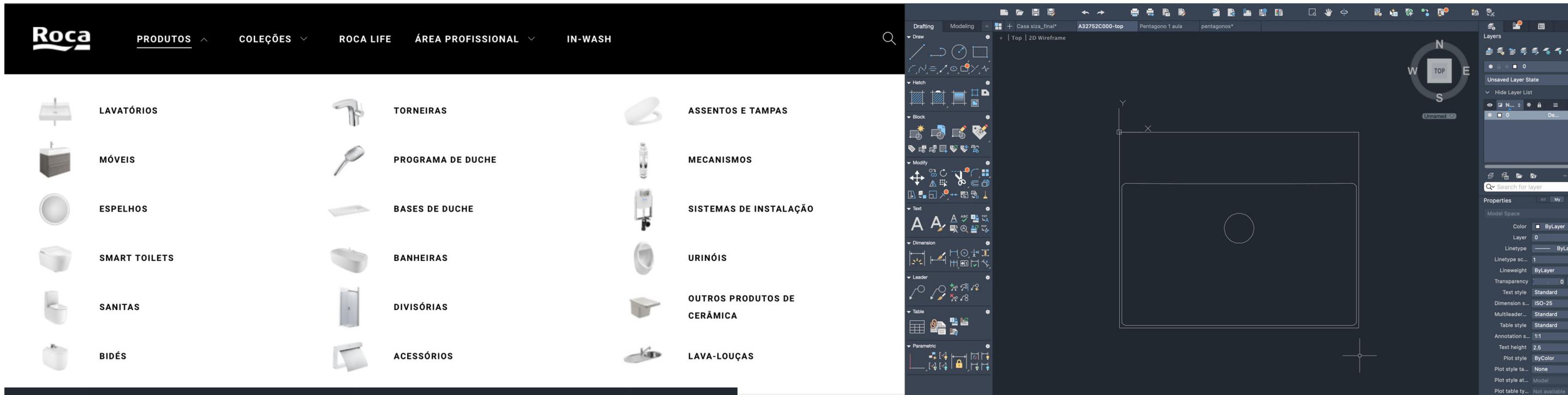
- Corte



- alçado

ReDig

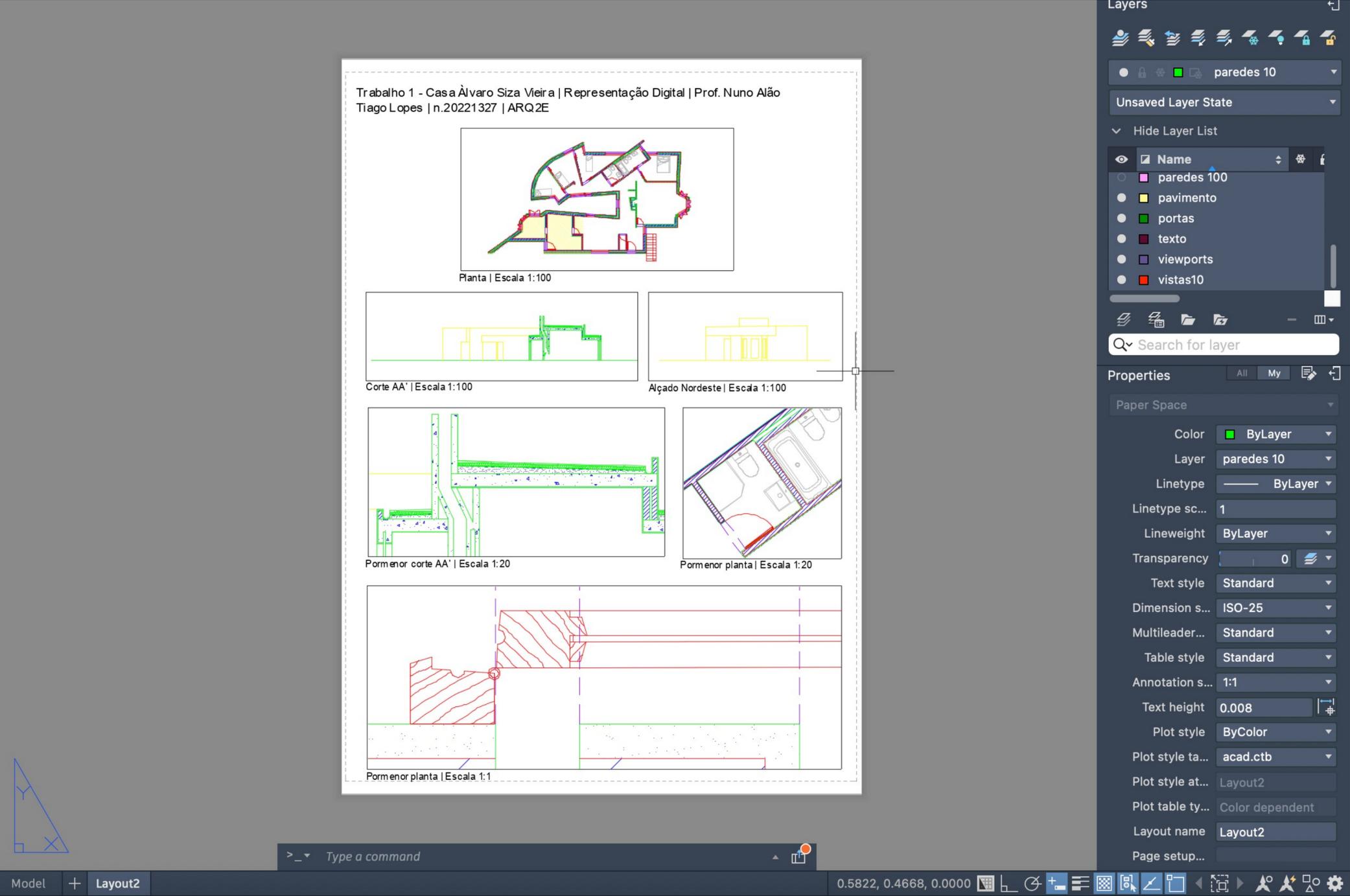
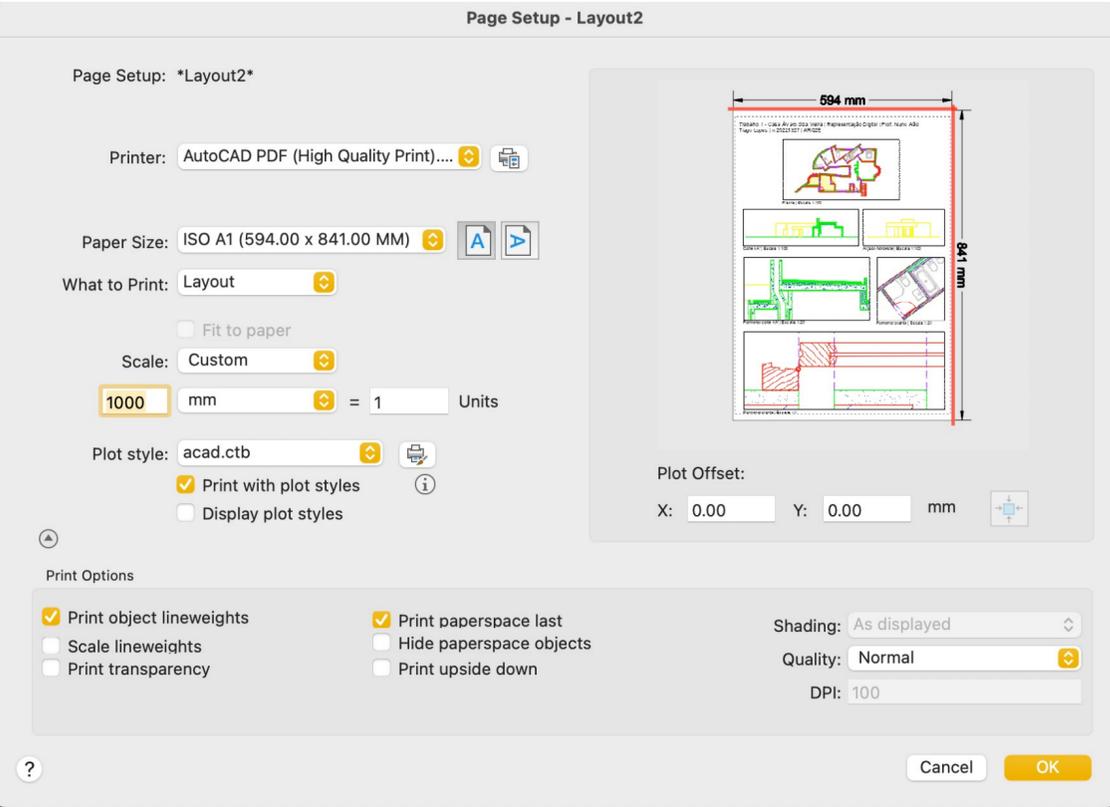
Aula 3 até 12 – 26/09 até 27/11



- Mobilia para as casas de banho e quartos
- Camas feitas por mim
- Mobilia da casa de banho do site roca

ReDig Aula 3 até 12 – 26/09 até 27/11

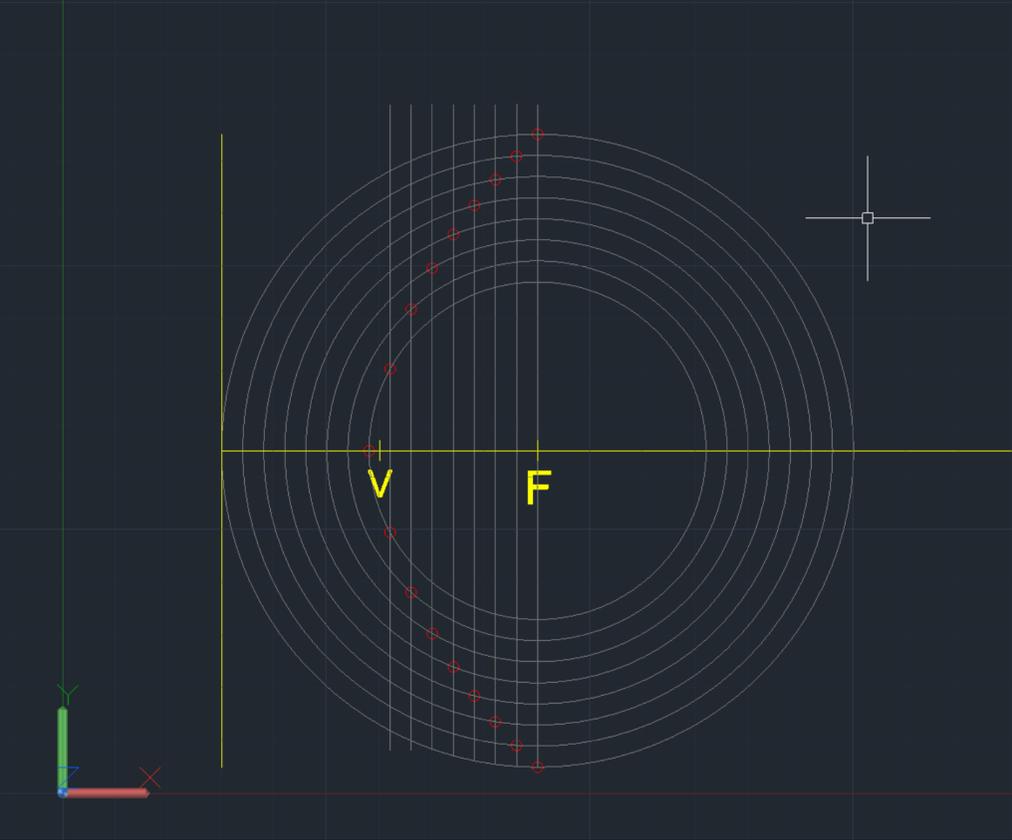
- Execução e setup dos layouts
- Aplicação de vports para as várias escalas
- Texto
- Editar os layers para cor preta e dimensões pretendidas para cada layer no plot style



ReDig

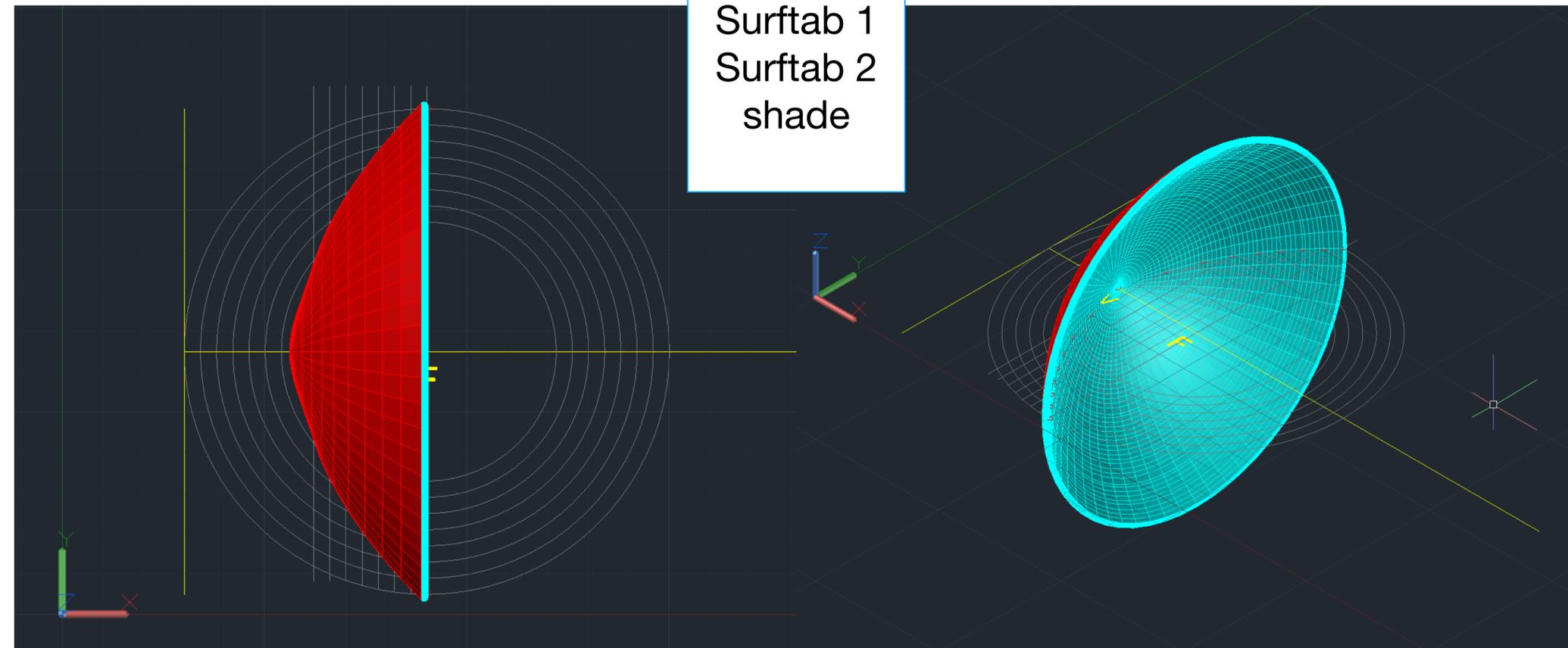
Aula 3 até 12 – 26/09 até 27/11

- Começamos 3D no Autocad a fazer uma parábola

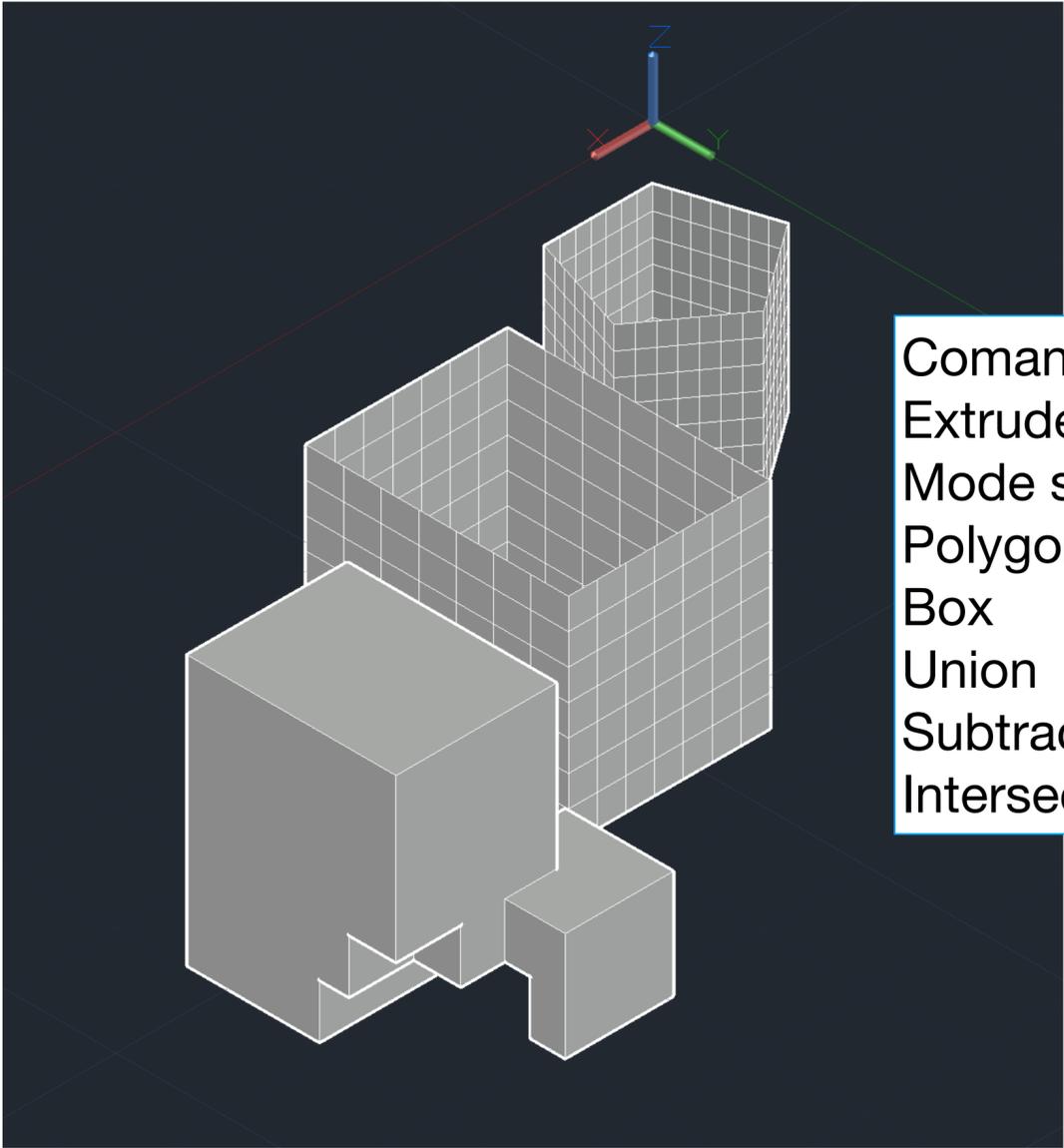


2D do processo para formar uma parábola

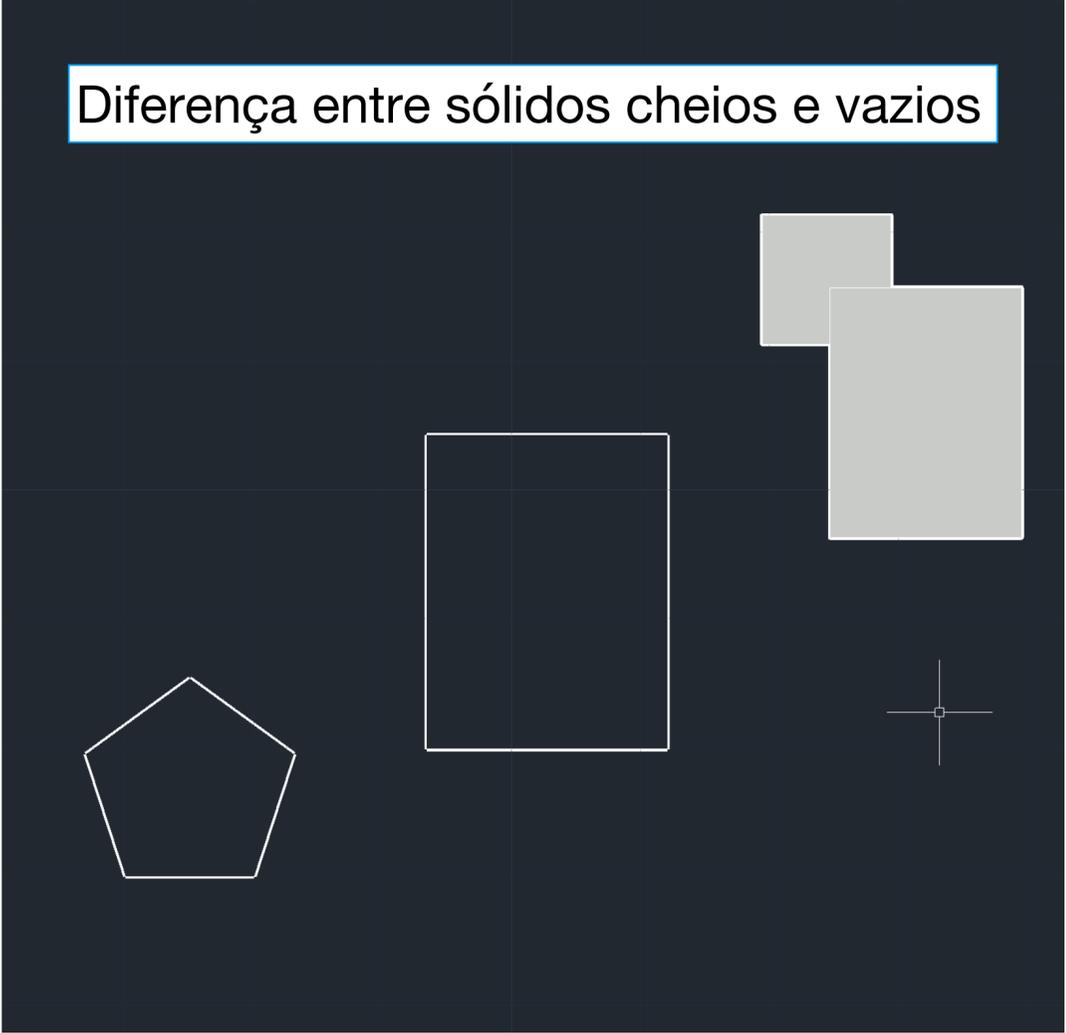
Comandos:
spline
Revsurf
Surftab 1
Surftab 2
shade



Realização de alguns sólidos em 3D + união e subtração entre eles

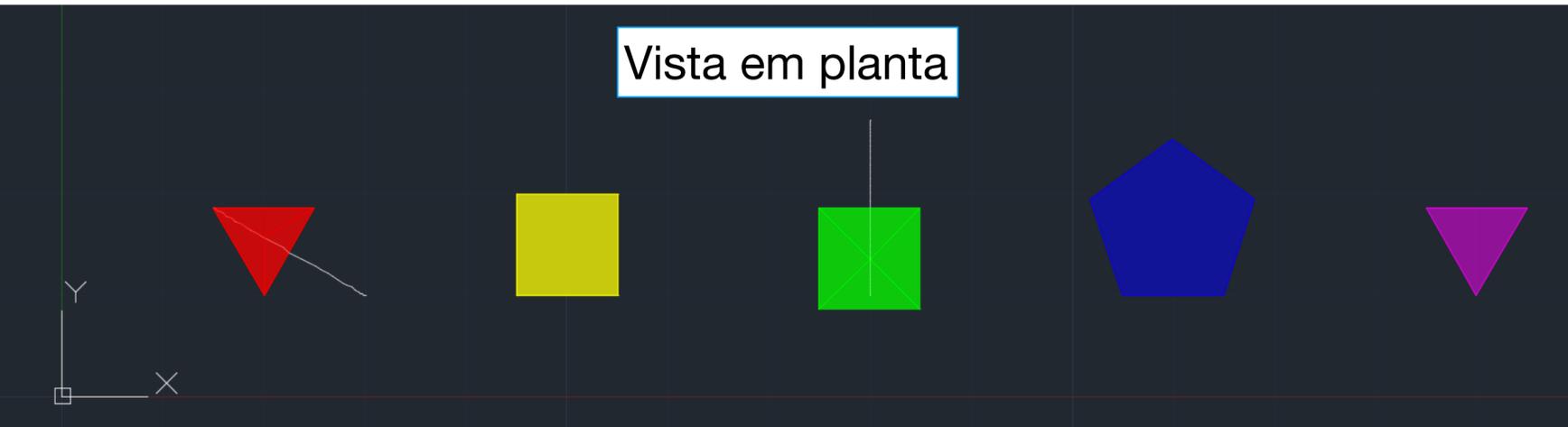


Comandos:
Extrude
Mode surface
Polygon
Box
Union
Subtract
Intersect



Diferença entre sólidos cheios e vazios

Vista em planta



- Começamos por criar as bases dos sólidos
- Depois fizemos mirror dos quadrados e triângulos para criar mais quadrados ou triângulos ligados as bases.
- Usamos de verticais no centro dos sólidos e circunferências auxiliares
- Usamos o comando “rotate 3D” e “3D rotate” dependendo do objetivo pretendido para criar uma das faces do polígono
- Com o comando “array”, as outras faces imitam o movimento antes feito

Criação de poliedros

- Tetraedro – base triângulo – 4 faces triangulares
- Hexaedro – base quadrado – 6 faces quadrangulares
- Octaedro – base quadrado – 8 faces triangulares
- Dodecaedro – base pentágono – 12 faces pentagonais
- Icosaedro – base triângulo – 20 faces triangulares

Vista em órbita



Vista de frente

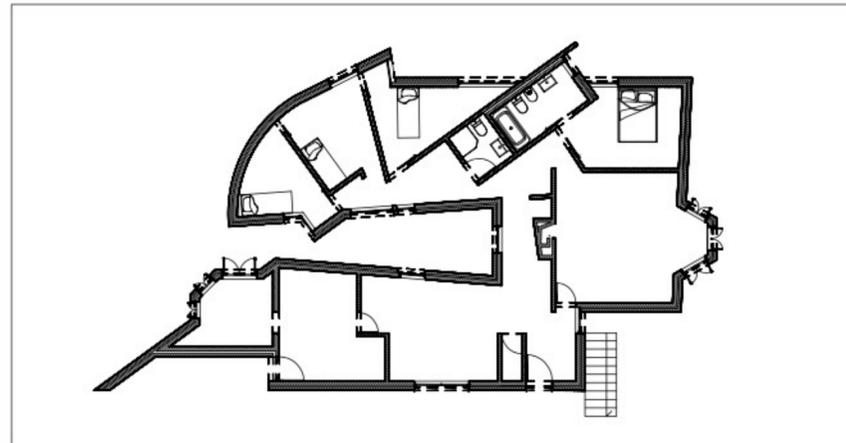


Nesta aula terminámos o trabalho 1 para entrega

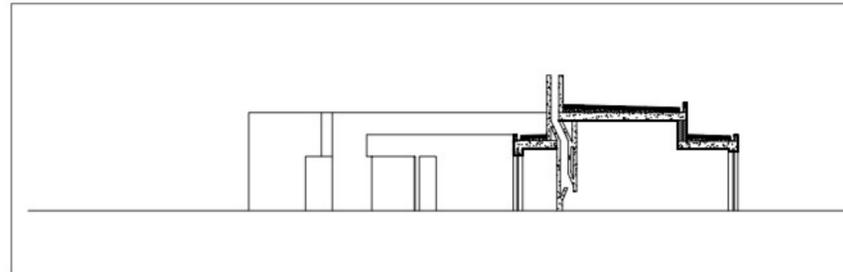
Entrega no próximo slide:

Layout exercício 1:

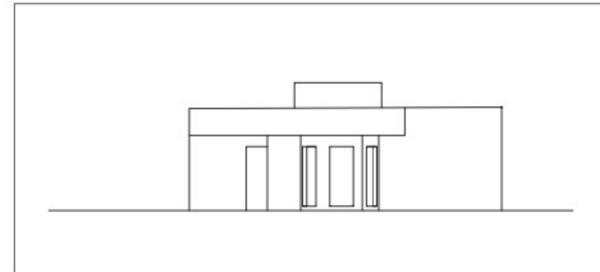
Trabalho 1 - Casa Álvaro Siza Vieira | Representação Digital | Prof. Nuno Alão
Tiago Lopes | n.20221327 | ARQ2E



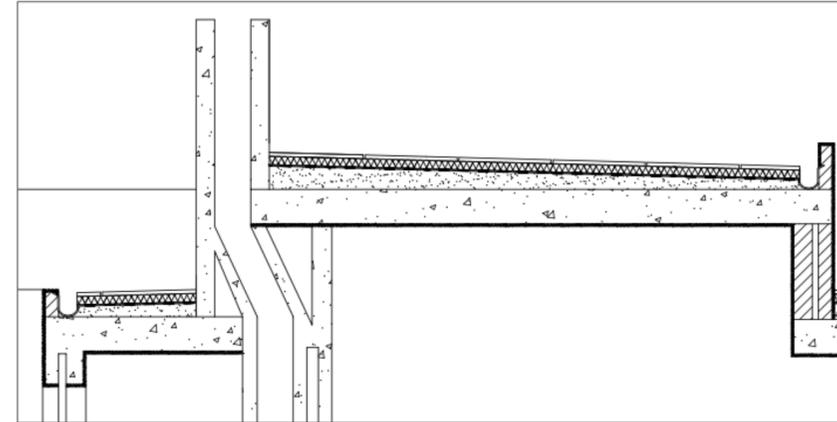
Planta | Escala 1:100



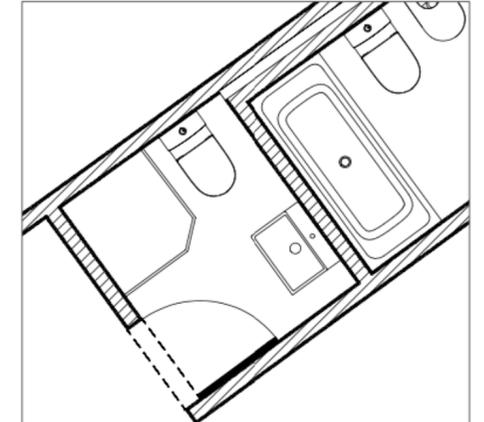
Corte AA' | Escala 1:100



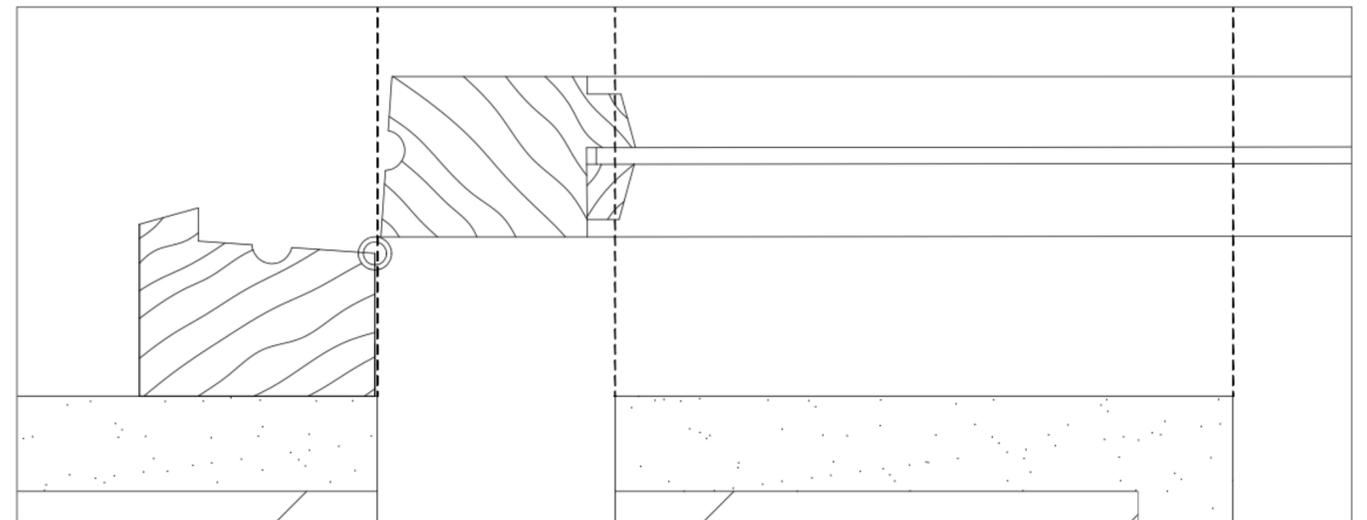
Alçado Nordeste | Escala 1:100



Pormenor corte AA' | Escala 1:20



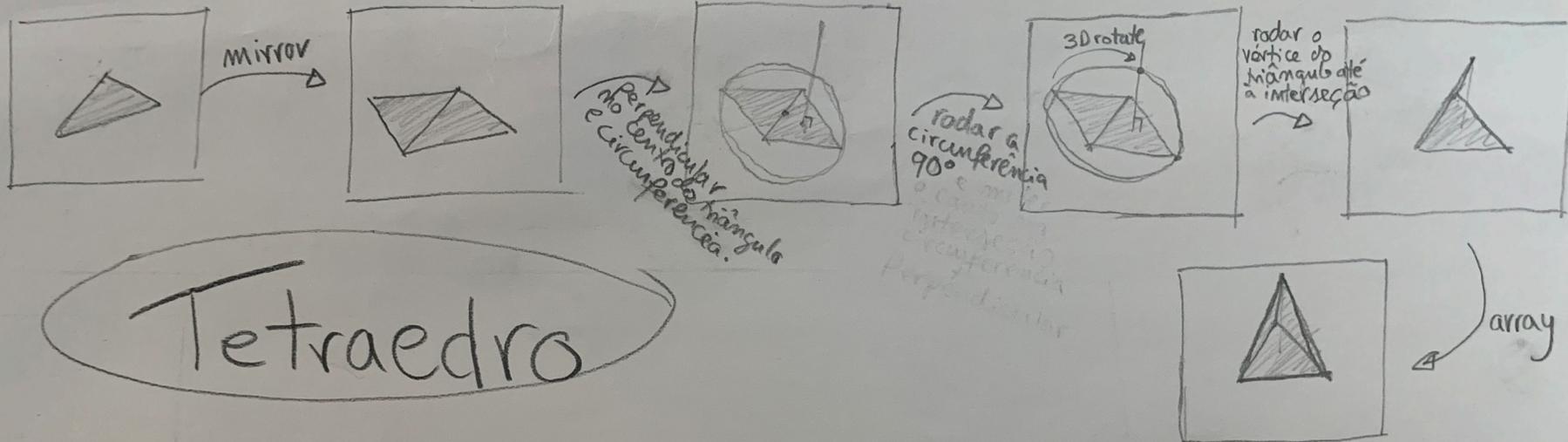
Pormenor planta | Escala 1:20



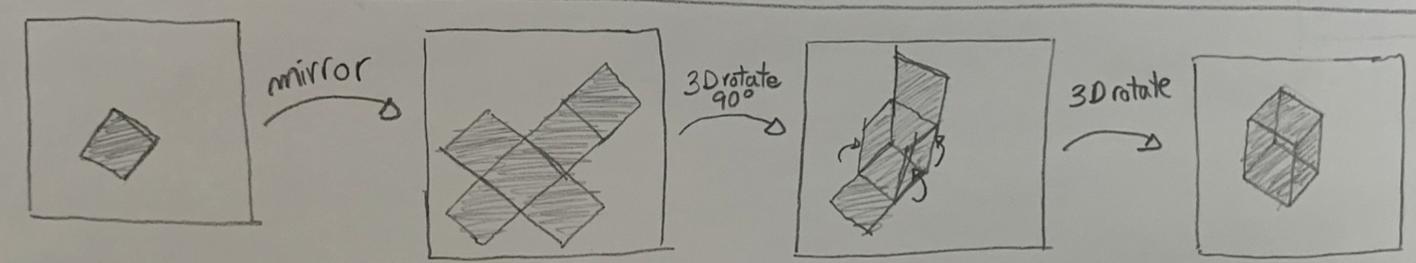
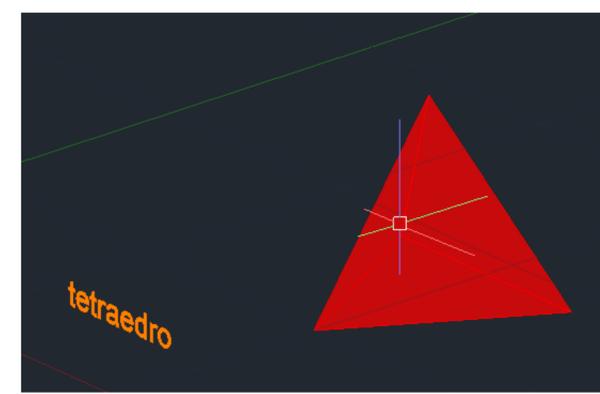
Pormenor planta | Escala 1:1

ReDig

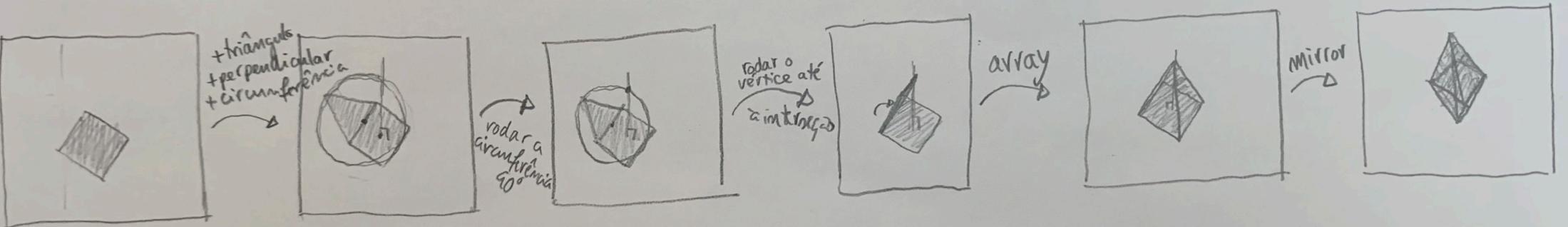
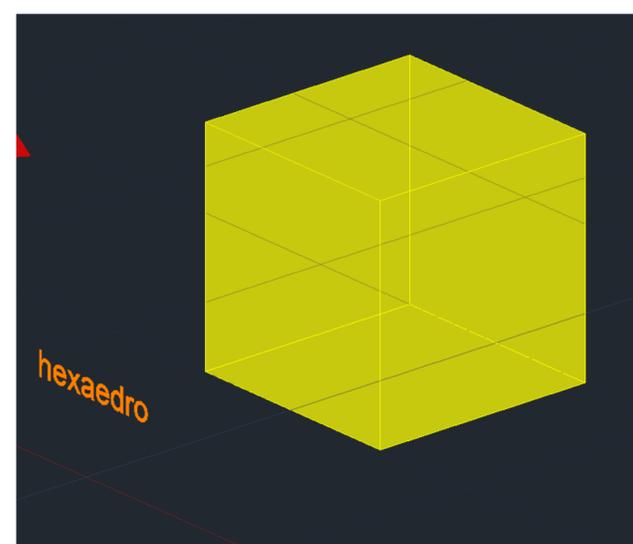
Exerc. 1.1 – ACAD 2D



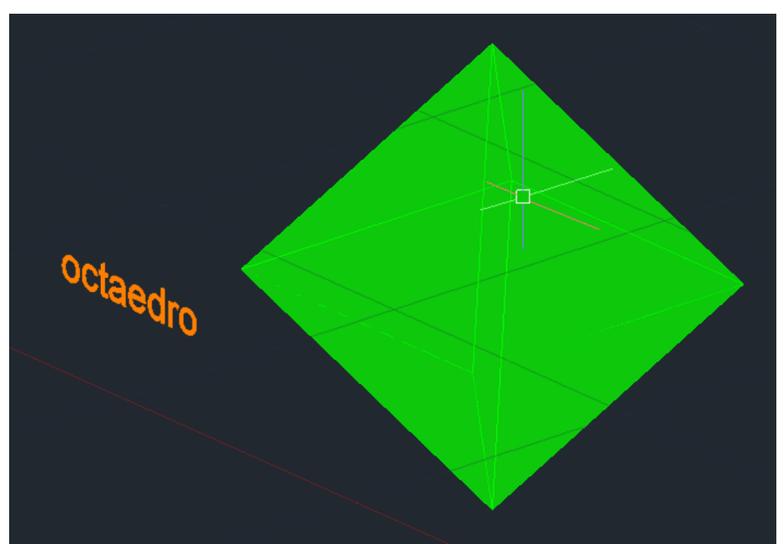
Tetraedro

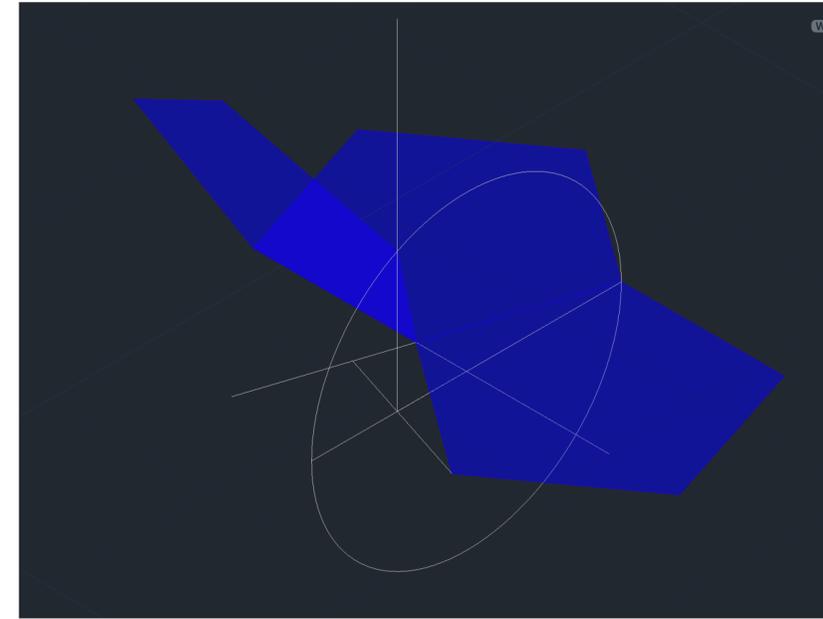
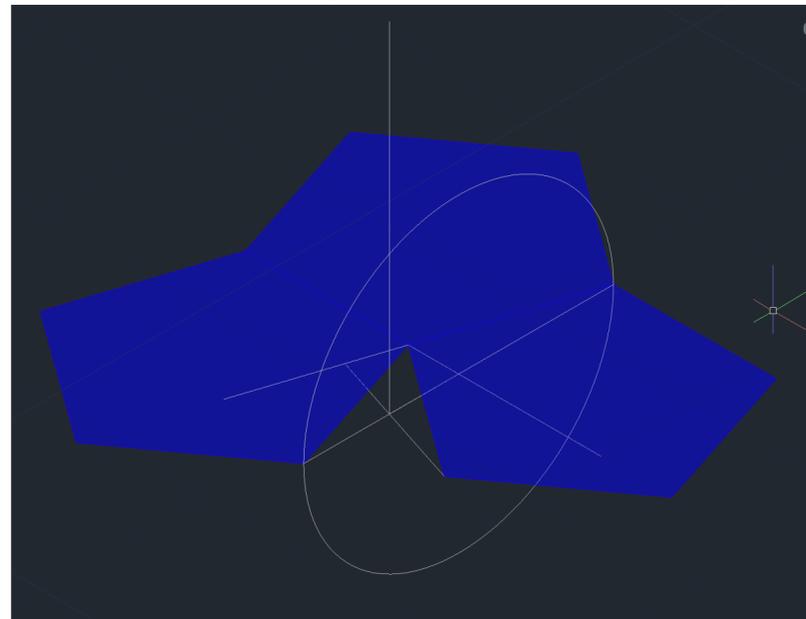
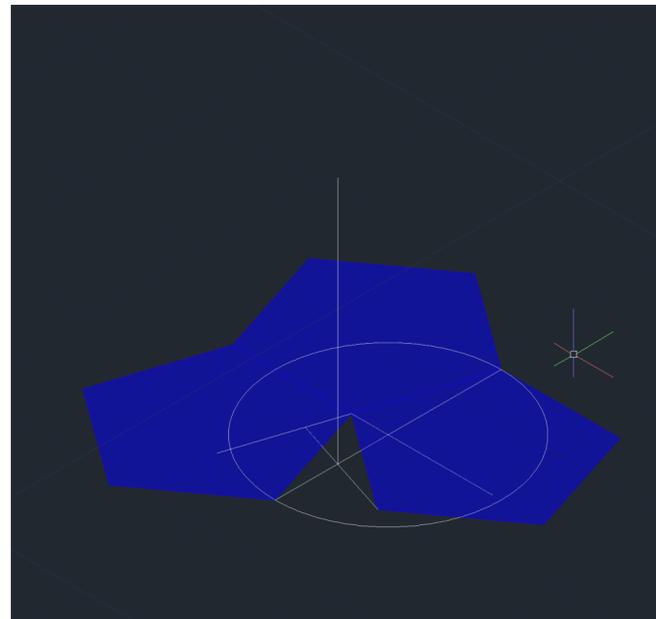
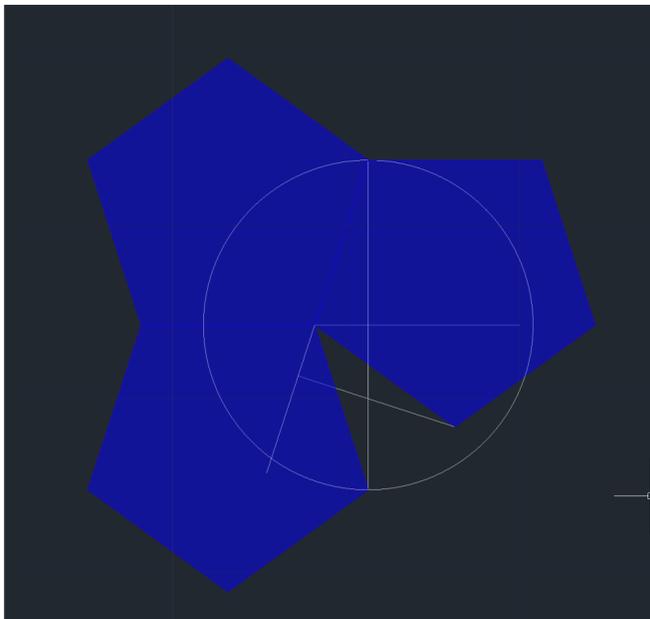


Hexaedro

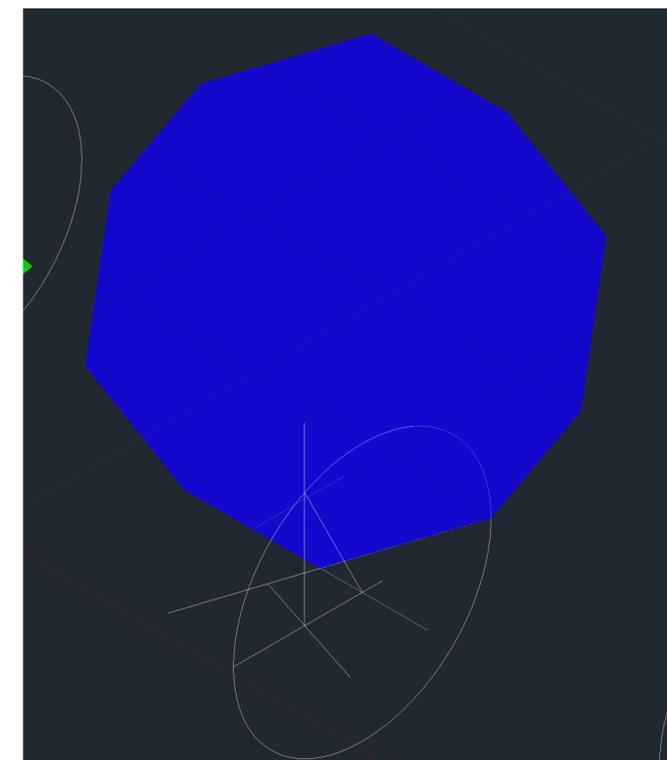
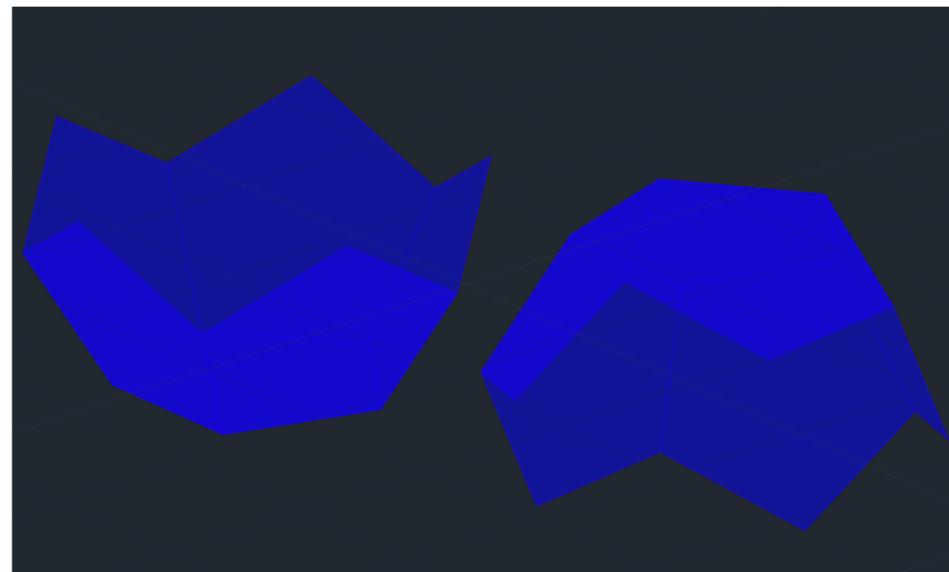
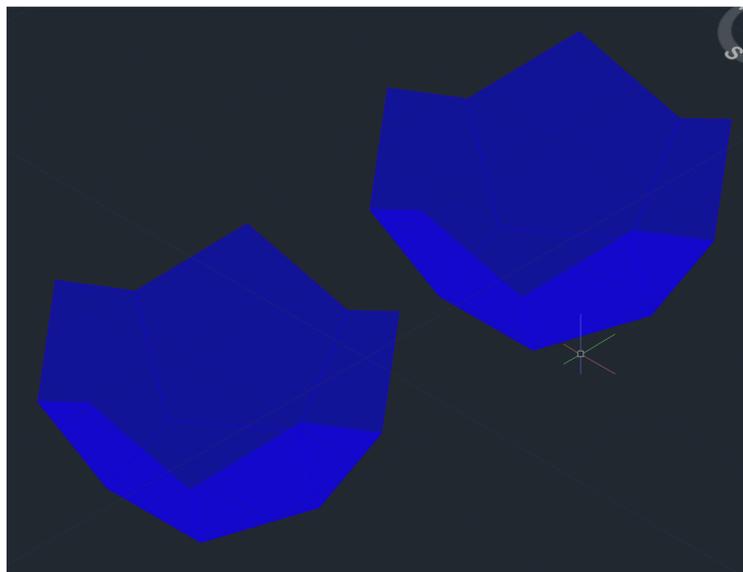
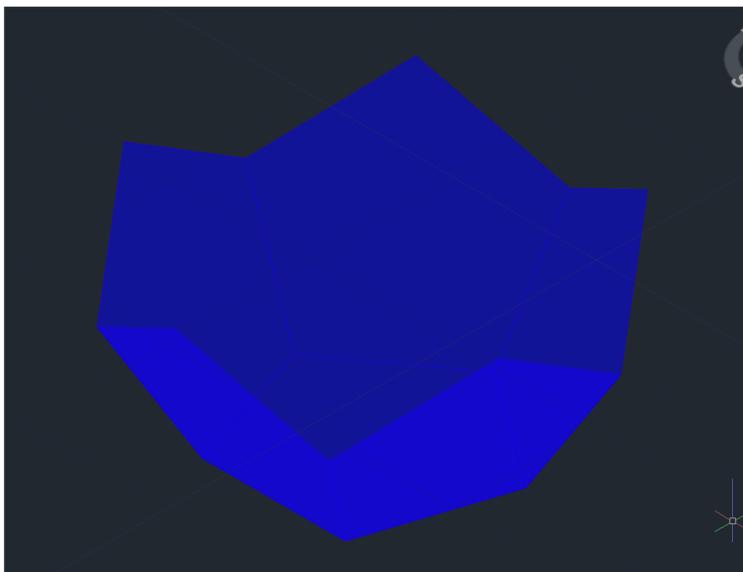


Octaedro



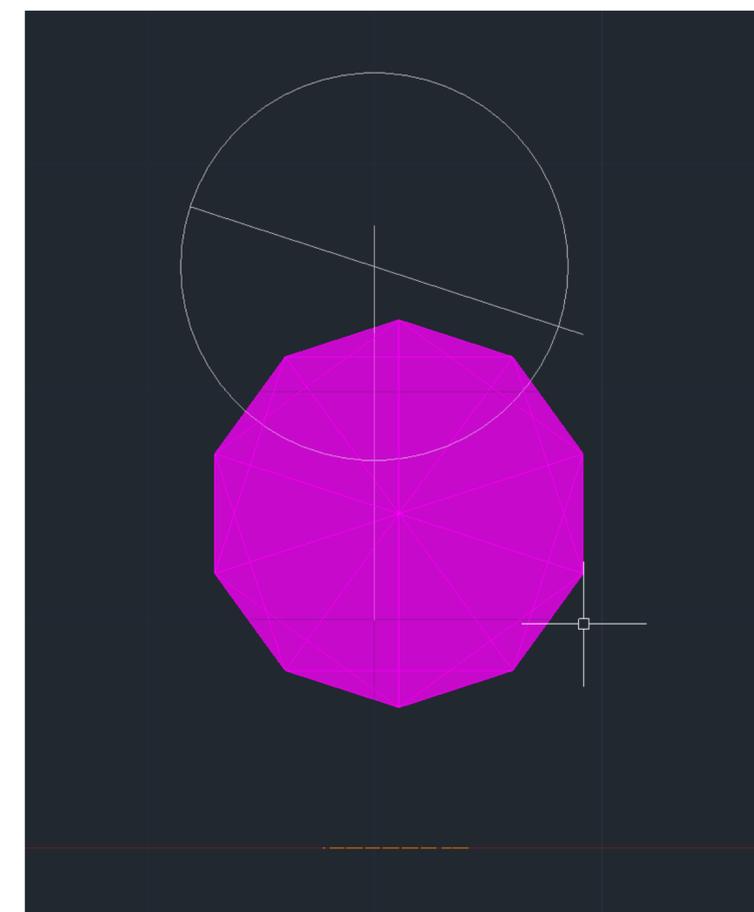
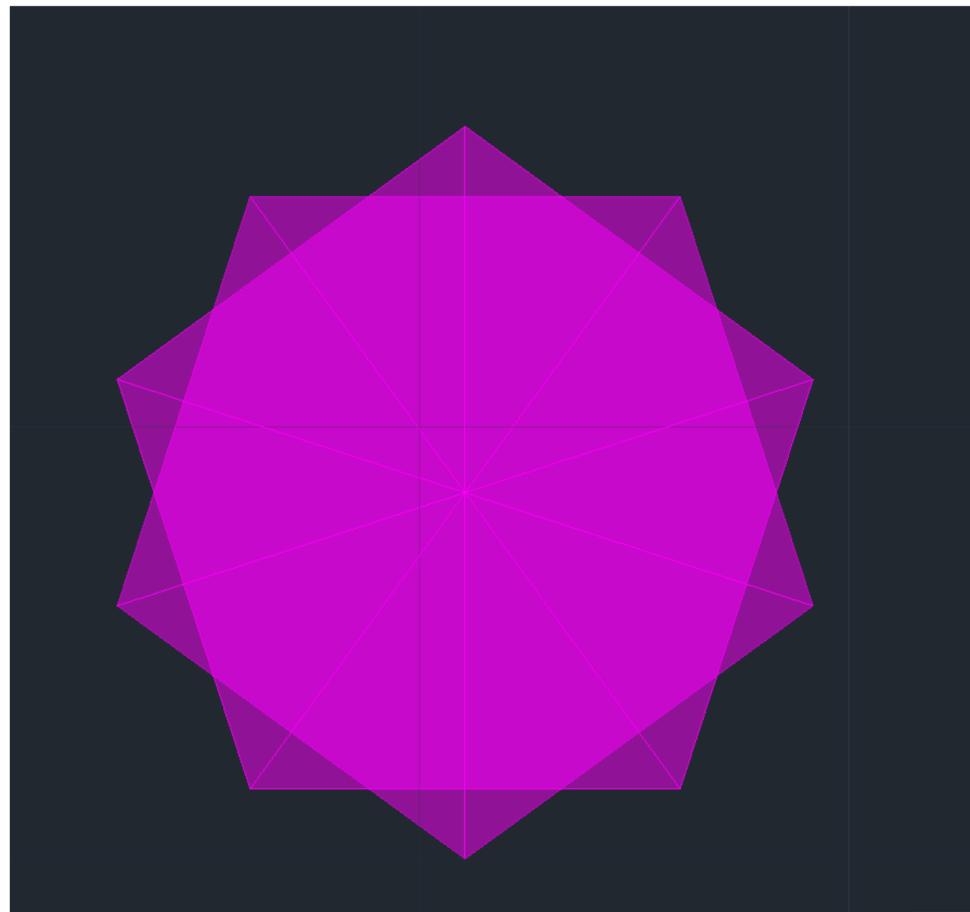
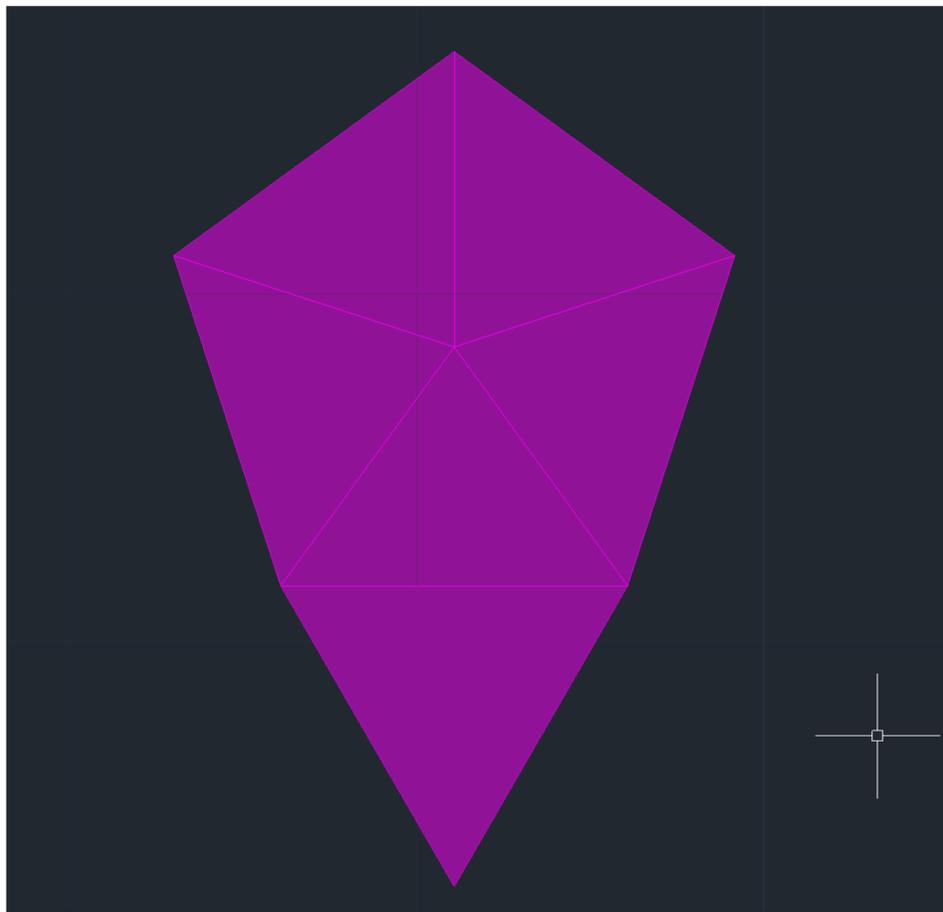


Dodecaedro



ReDig.

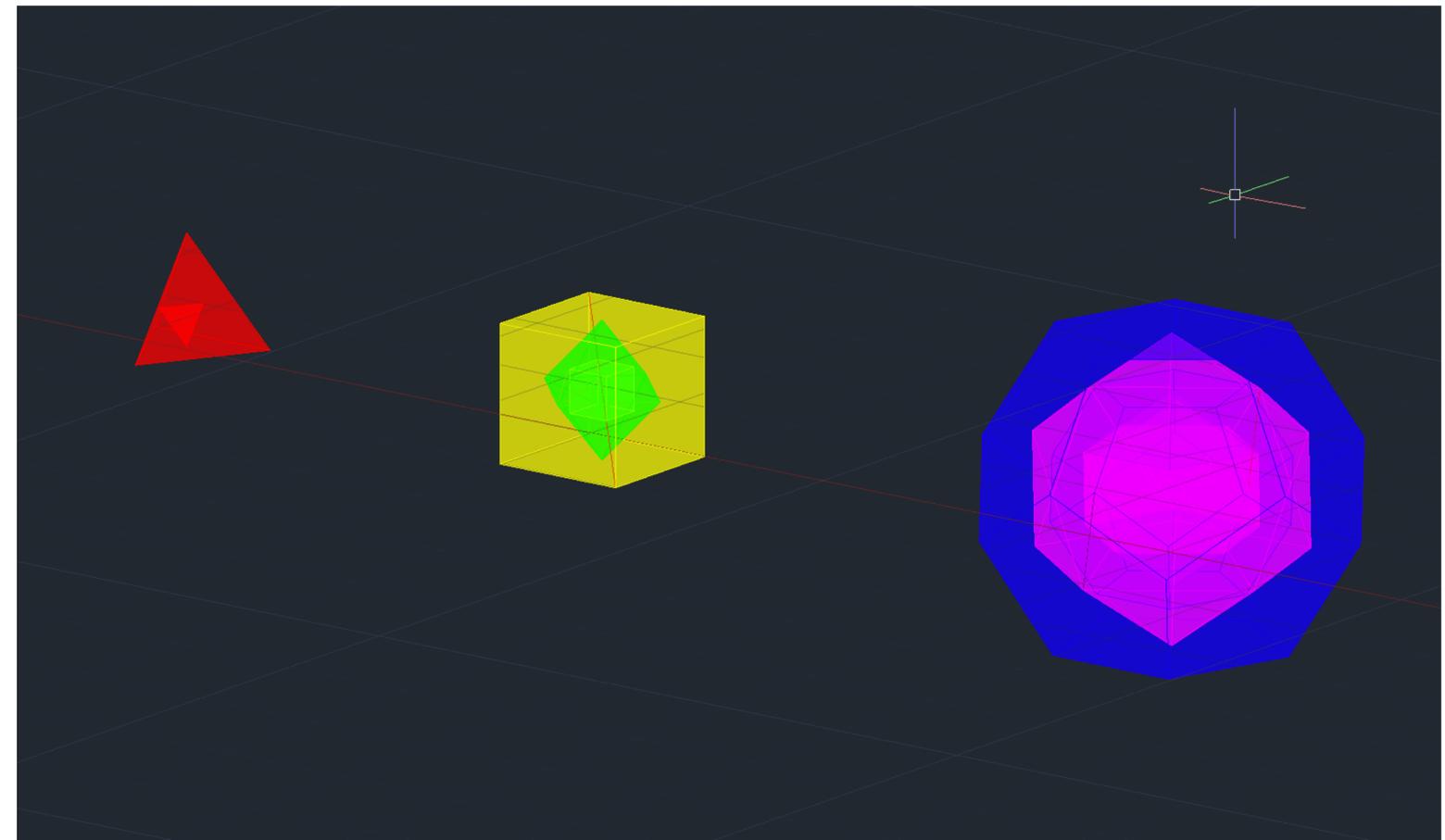
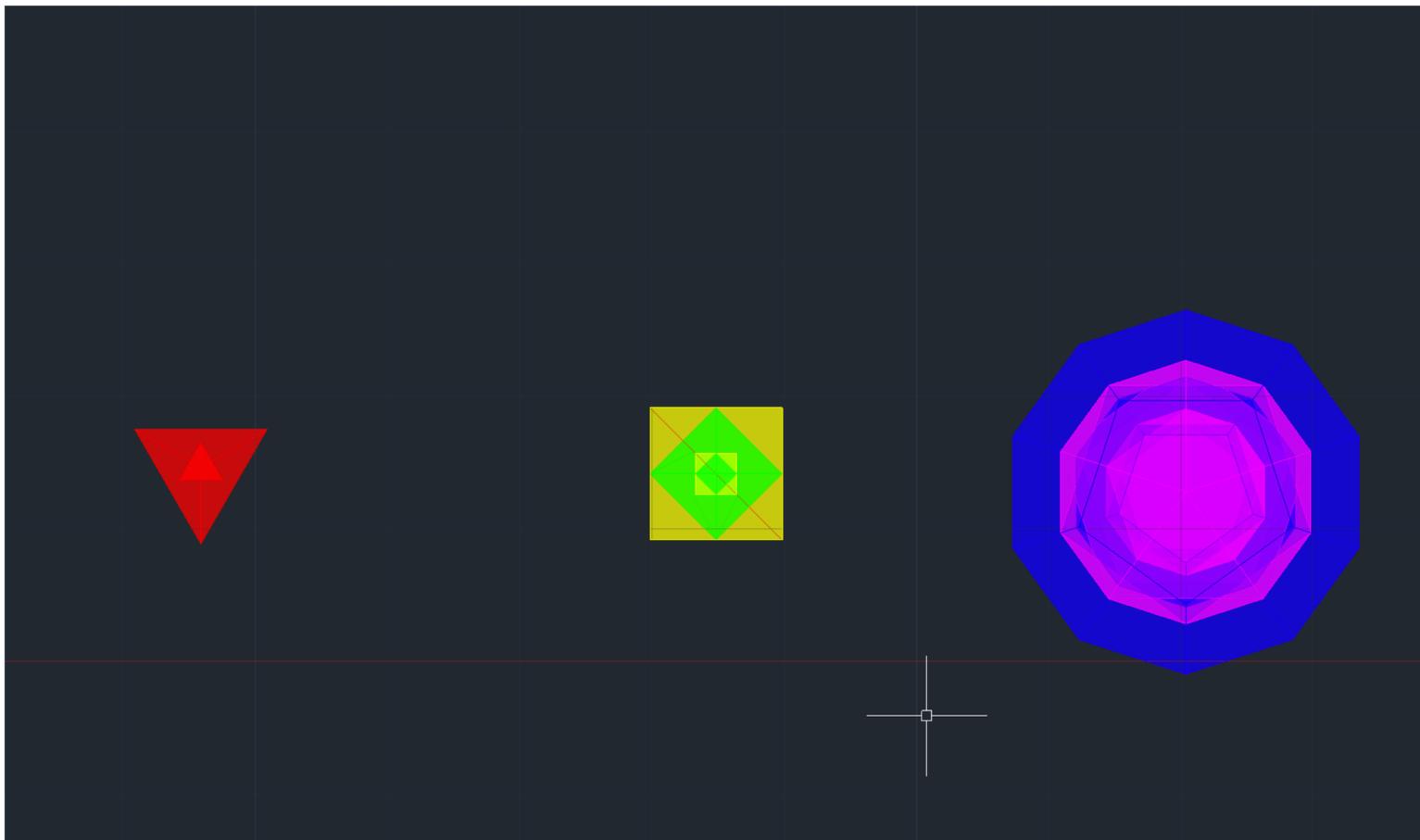
Poliedros



Icosaedro

- Começamos por fazer 1 prisma com base pentagonal e lados triangulares.
- Depois, tirando a base do prisma, e com um “mirror3d” e uma rotação, conseguimos meter os dois prismas como a 2ª imagem mostra.
- Trazendo uma perpendicular através do prisma inferior e uma circunferência com o raio da altura do triângulo, conseguimos descobrir para onde irá o vértice do triângulo
- Com um “3dmove” posso trazer o prisma inferior até à cota que deve e depois é só preencher os espaços com triângulos





- Vermelho:
Tetraedro dentro de um tetraedro
- Amarelo e verde:
Octaedro dentro de um hexaedro dentro de um octaedro dentro de um hexaedro
- Azul e rosa:
Icosaedro dentro de um dodecaedro dentro de um icosaedro dentro de um dodecaedro