

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

20221405

Rodrigo Gonçalves



ÍNDICE

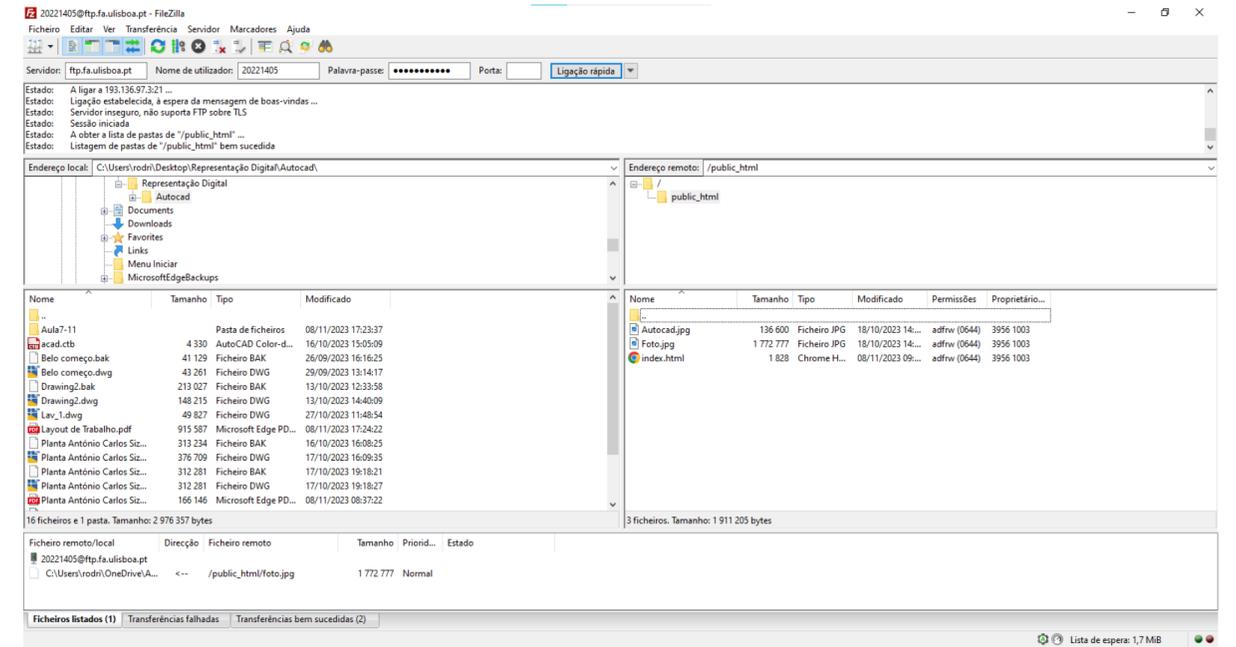
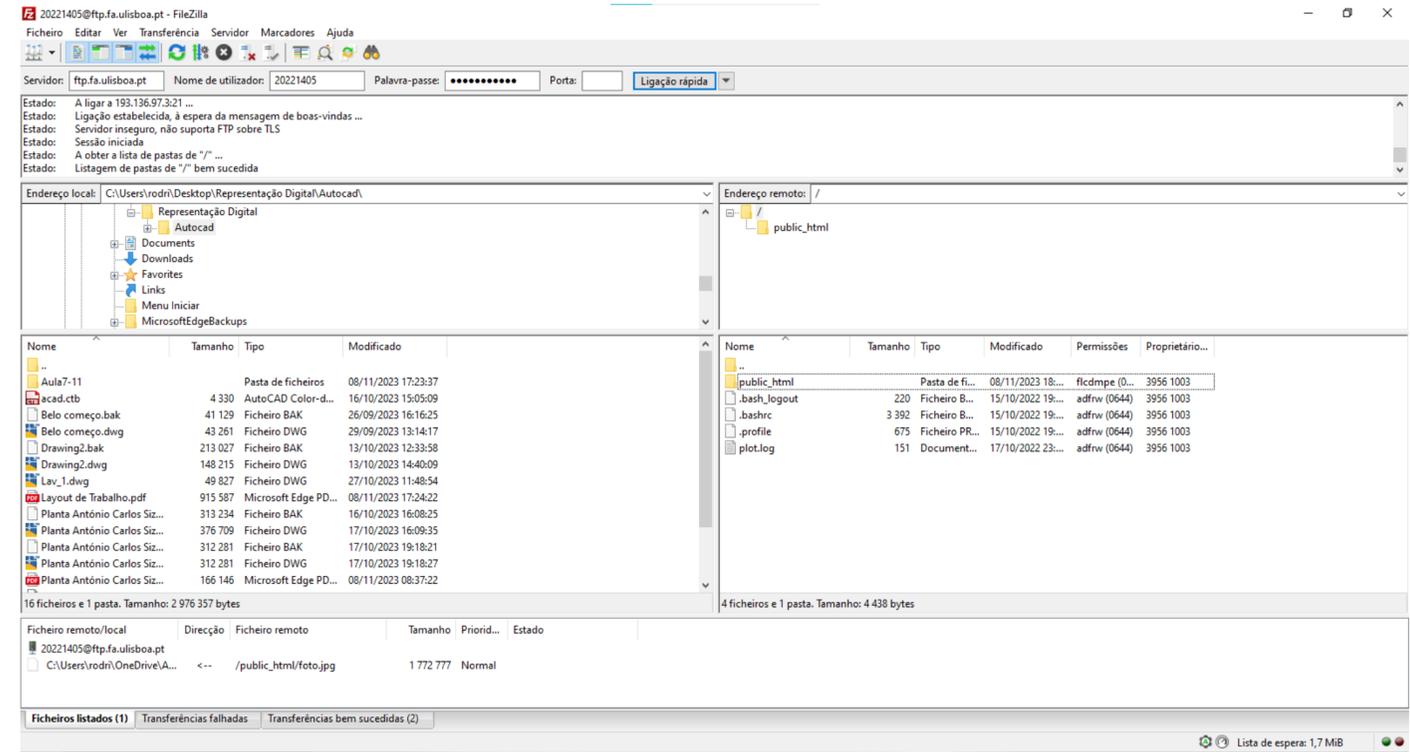
- Semana 1- Slide 4
- Semana 2- Slide 6
- Semana 3- Slide 14
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- Semana 13
- Semana 14

Introdução á U.C.

Criação do site, no qual serão realizadas todas as entregas:

- ftp.fa.ulisboa.pt
- nº do alunos
- Palavra-Passe do Moodle
- Criar Pasta public_html
- Alterar os códigos do layout dado pelo professor no Notepad++
- Colocar o ficheiro editado e as fotografias no FileZilla com o nome index_html

```
1 <html>
2 <head>
3 <title> Rodrigo Alexandre Tavares Gonçálcodedilvalves </title>
4 <style>
5 body {
6   background-color: grey;
7   font-family: Arial, monospace;
8 }
9 p.sansserif {
10  font-family: Arial, sans-serif;
11 }
12 h1 {
13  color: black;
14  text-align: left;
15  font-family: arial, sans-serif;
16  font-size: 35px;
17 }
18 footer {
19  color: black;
20  text-align: center;
21  font-family: arial, sans-serif;
22  font-size: 15px;
23 }
24 </style>
25 <!--/head>
26 <link type="text/css" rel="stylesheet" href="estilos.css">
27 <body>
28 <div id="Autooad.jpg" style="position: absolute; left: 850px; top: 100px; width: 430px; height: 50px; z-index: 0; margin-left: 300px; margin-bottom: 250px">
29 <br>
30 </div>
31 <div class="quadro">
32 <br>
33 <div id="Foto.jpg" style="position: absolute; left: 500px; top: 100px; width: 430px; height: 50px; z-index: 0; margin-left: 300px; margin-bottom: 250px">
34 <br>
35 </div>
36 <br>
37 <br>
38 </div>
39 <a href="http://home.fa.ulisboa.pt/~nmoalao/2023_2024_2ano_RD_Arq_Turma_B.html">Representaçãodedilvalves Digital</a><br>
40 <a href="http://www.fa.ulisboa.pt/">Faculdade de Arquitectura - Ulisboa </a>
41 </div>
42 </div>
43 </body>
```



ReDig

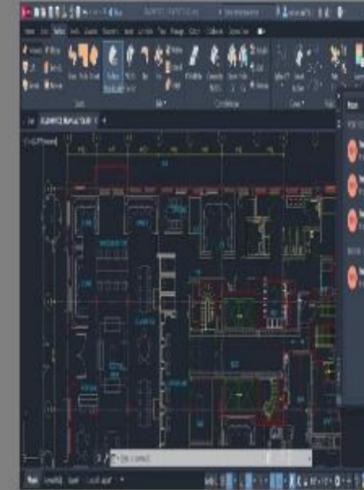
Semana 1

[Representação Digital](#)
[Faculdade de Arquitetura - ULisboa](#)

2023/2024
Nuno Aíão

Rodrigo Alexandre Tavares Gonçalves

20221405
Arq 2º Ano
Turma E



[Entregas](#)
[Entregas DWG](#)
[Diário Gráfico](#)
rodrigotavaresgoncalves@gmail.com

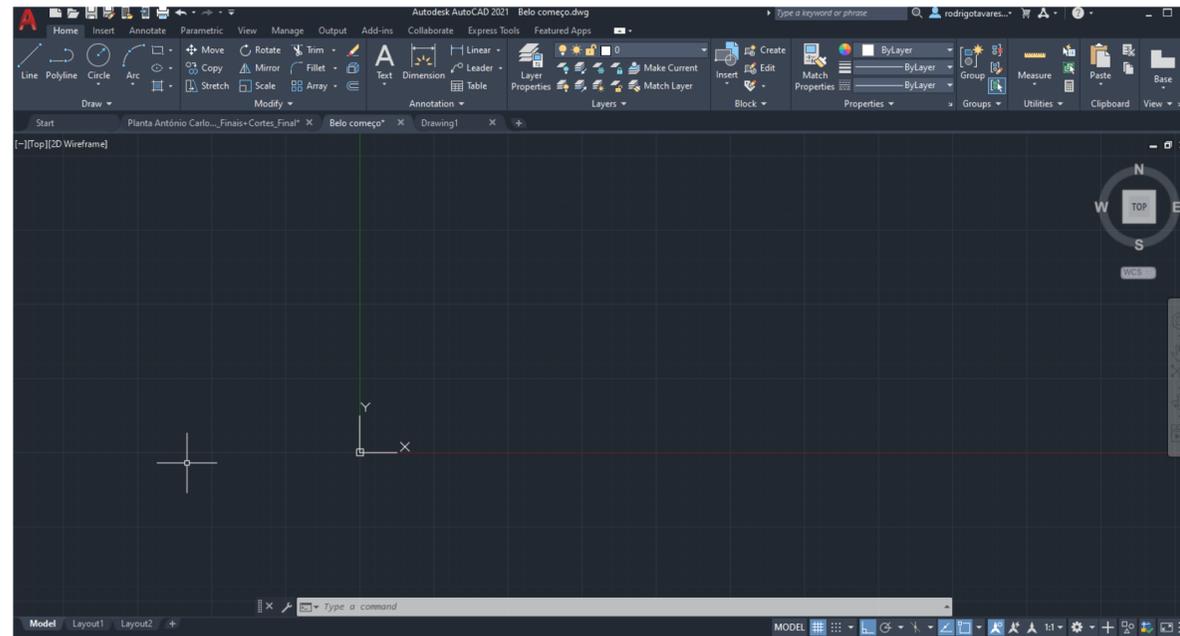
ReDig

Semana 1

Primeiro contacto com o autocad na U.C

Comandos para a utilização do programa:

- L - Line
- PL – Polyline
- O – Offset
- TR – Trim
- STR – Stretch
- CL – Close
- DI – Dist
- H – Hatch
- M – Move
- E – Erase
- CO – Copy



Coordenadas

Coordenadas Cartesianas (x,y,z) = #

- Absolutas
- Relativas

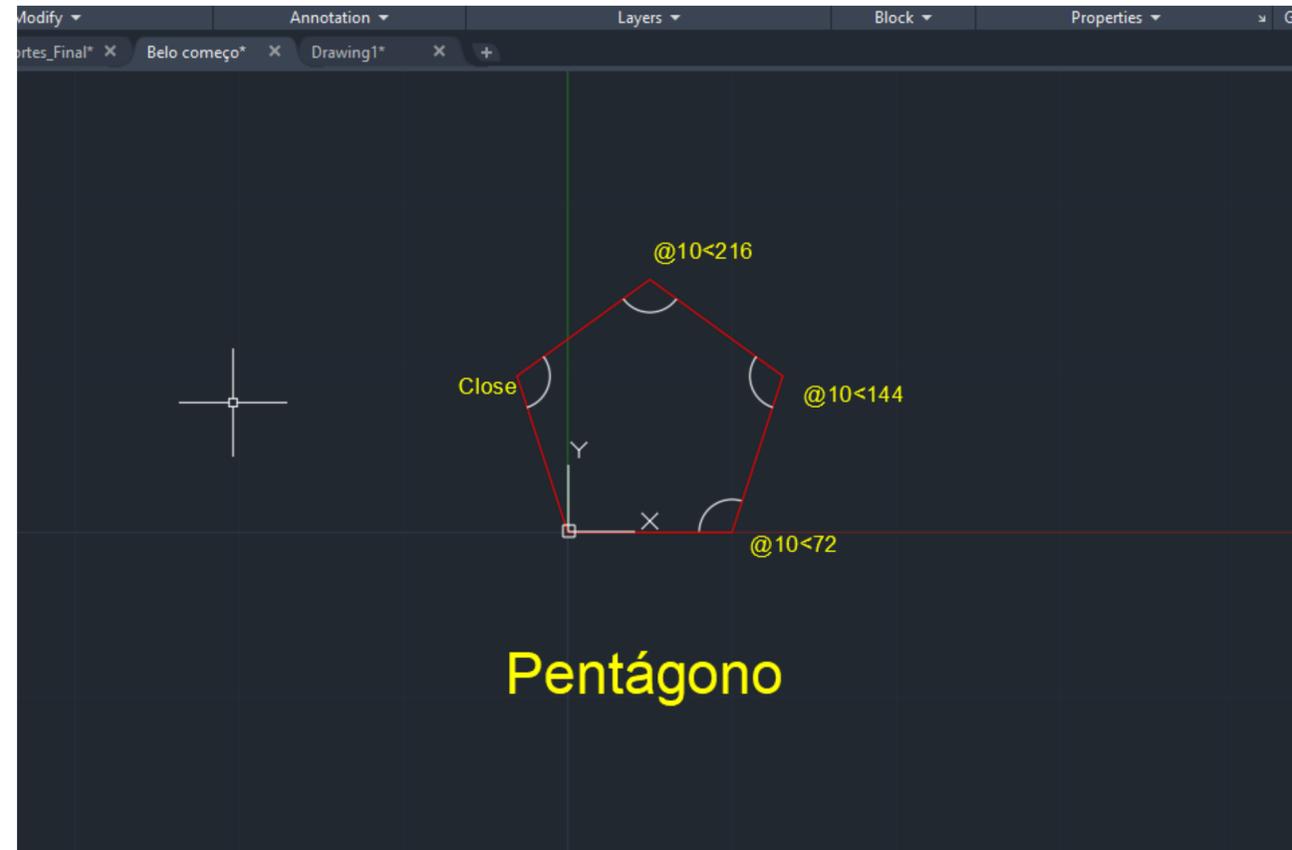
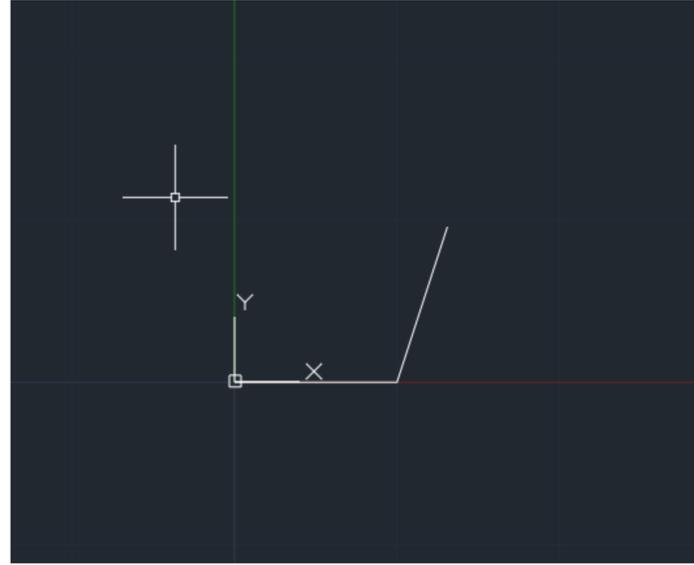
Coordenadas Polares = @

- Dist.< Ângulo

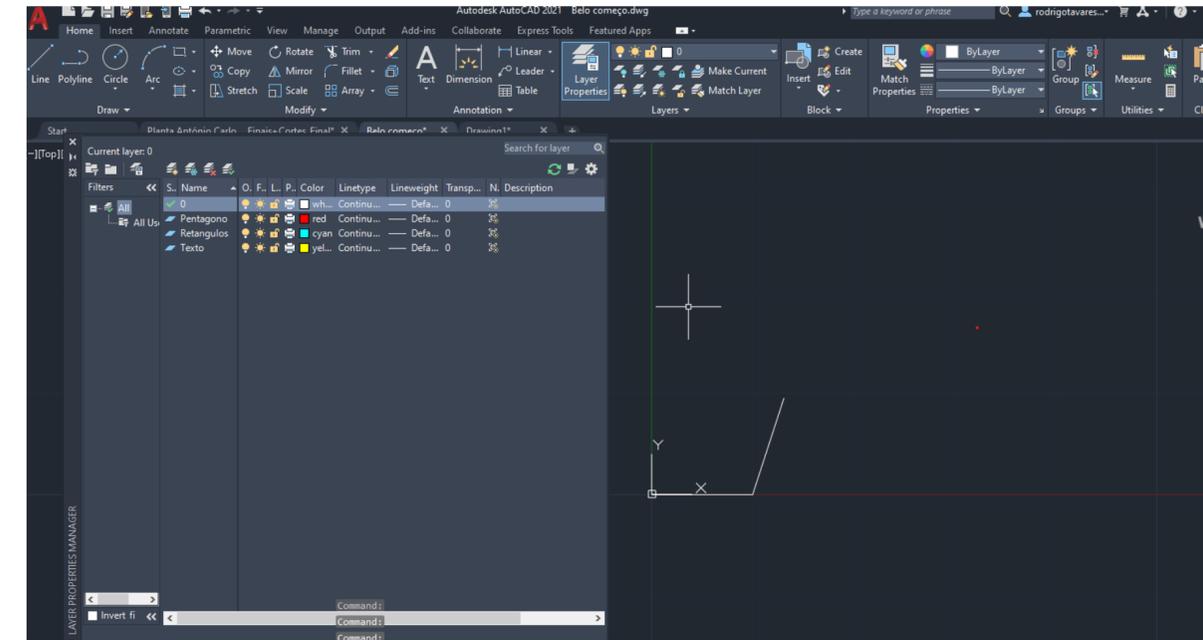
Escala: Medidas reais nas quais através de uma equação são representadas no desenho.

Proporção: Relação entre duas dimensões do mesmo objecto.

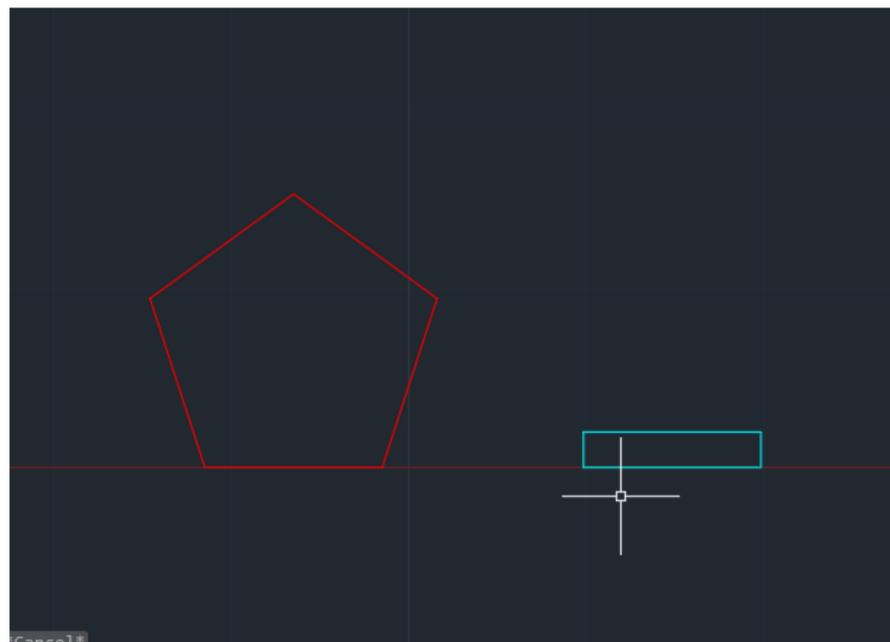
Construção de um Pentágono



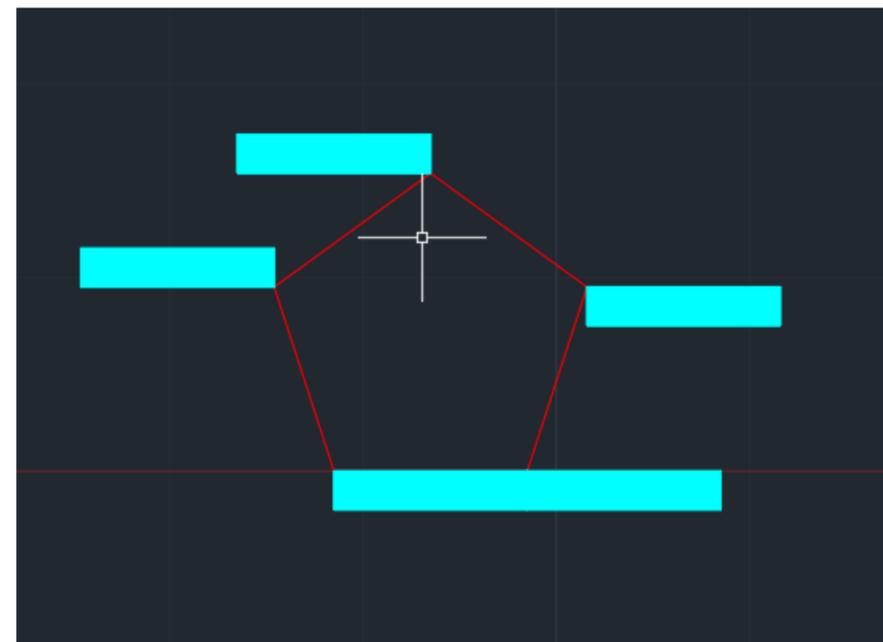
Criação de Layers



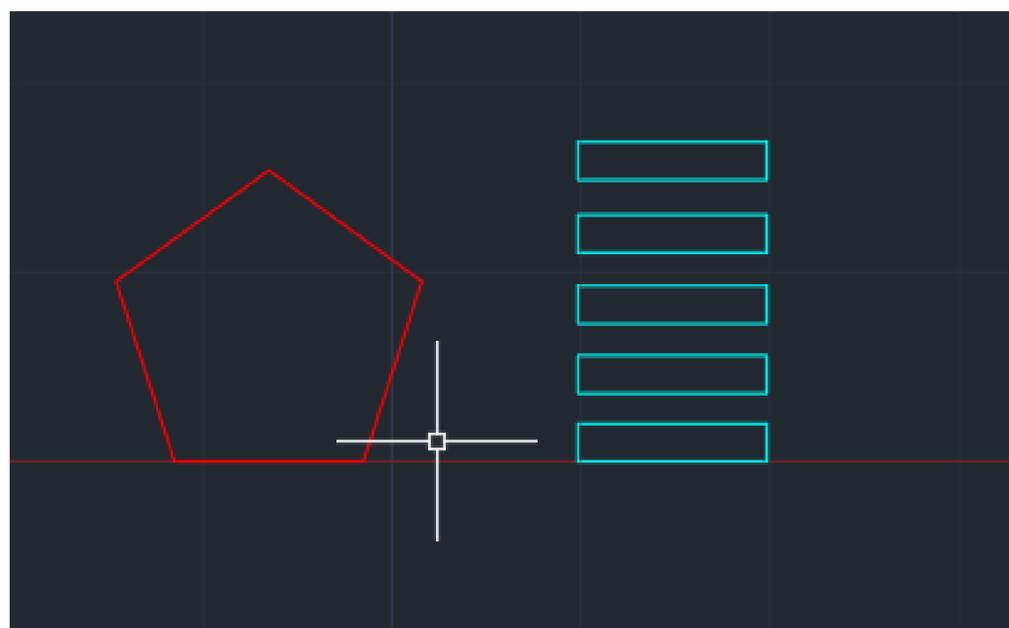
Construção de um Pentágono



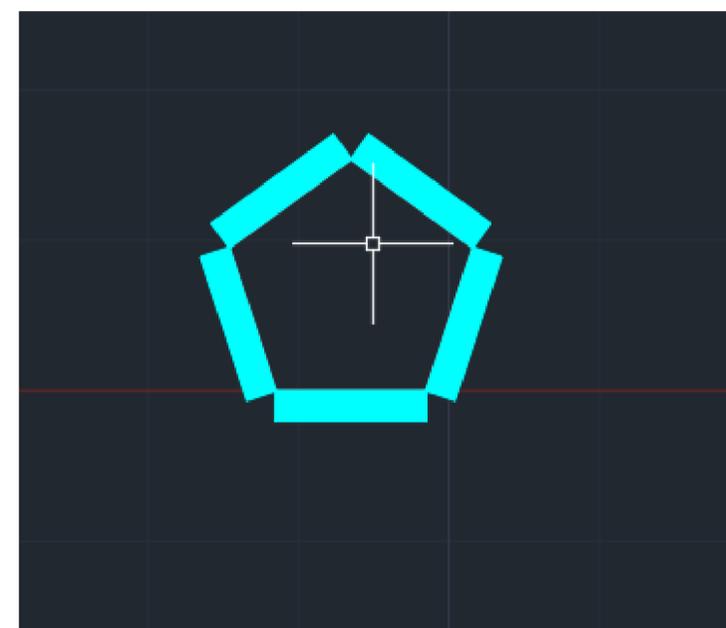
Construção de um retângulo



Preenchemos os retângulos com HATCH solid e movi para arestas do pentágono



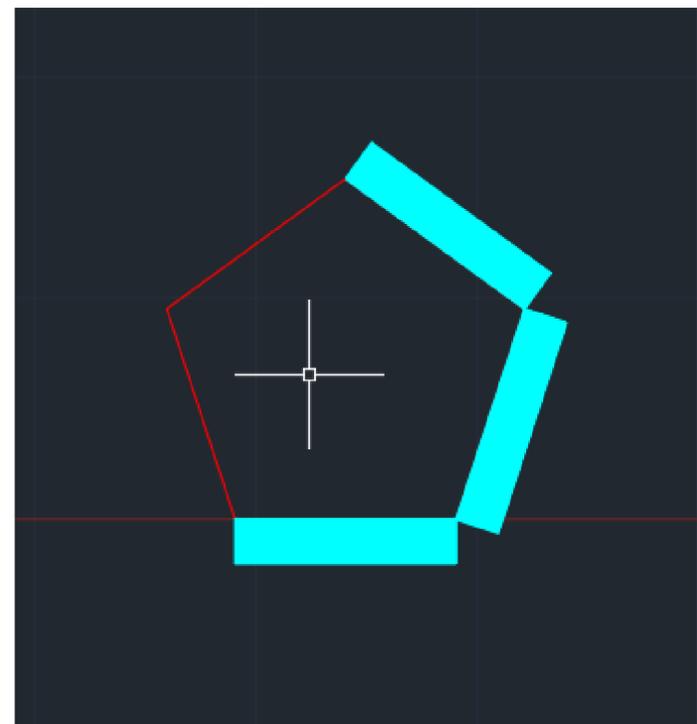
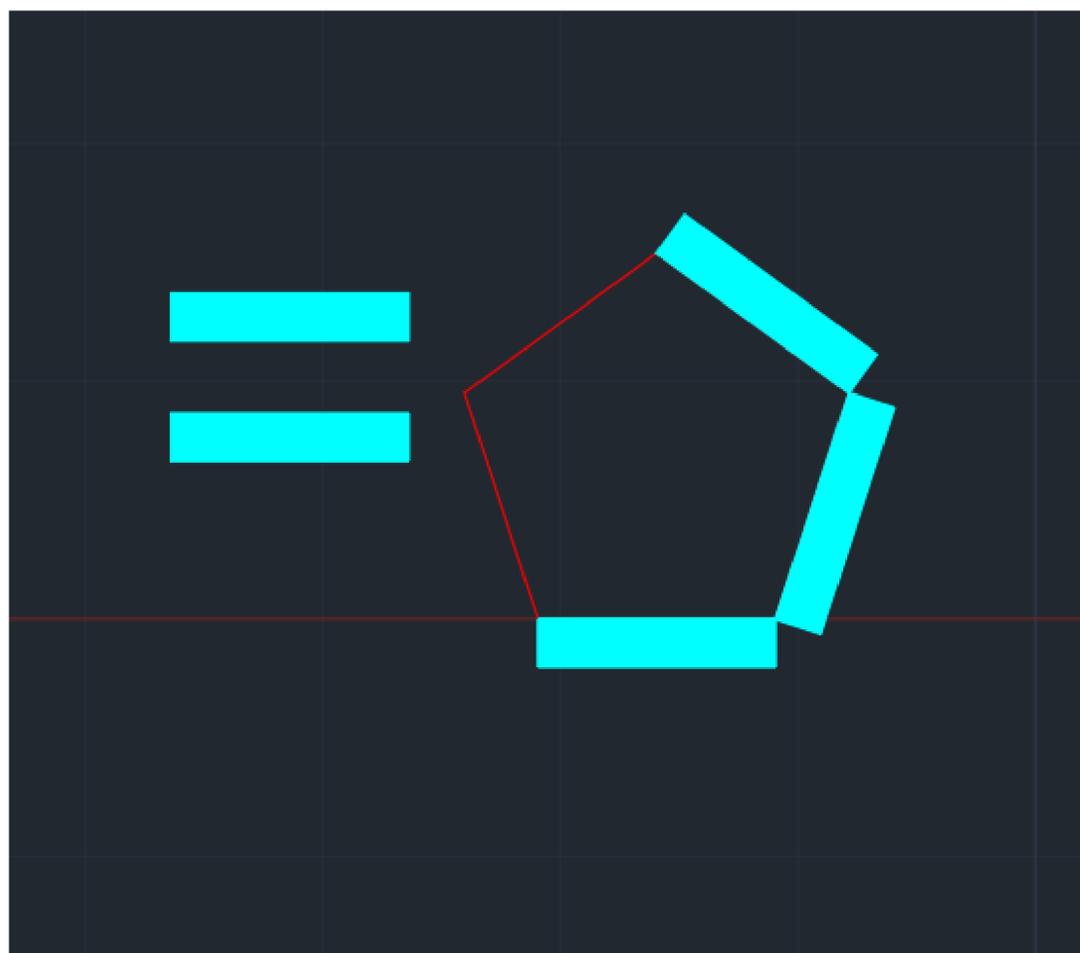
Com o COPY faz-se várias cópias do retângulo original



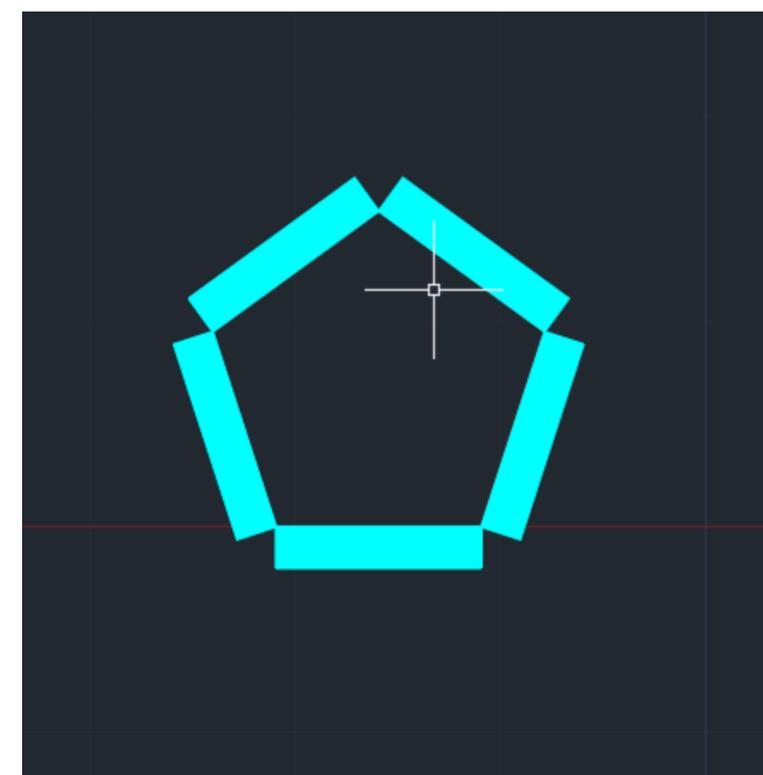
Completei a forma usando o ROTATE para alinhar as arestas do retângulo com as do pentágono

Construção de um Pentágono

Nesta forma obtenho o objeto final através do ALIGN para alinhar as arestas maiores dos retângulos com as arestas do pentágono

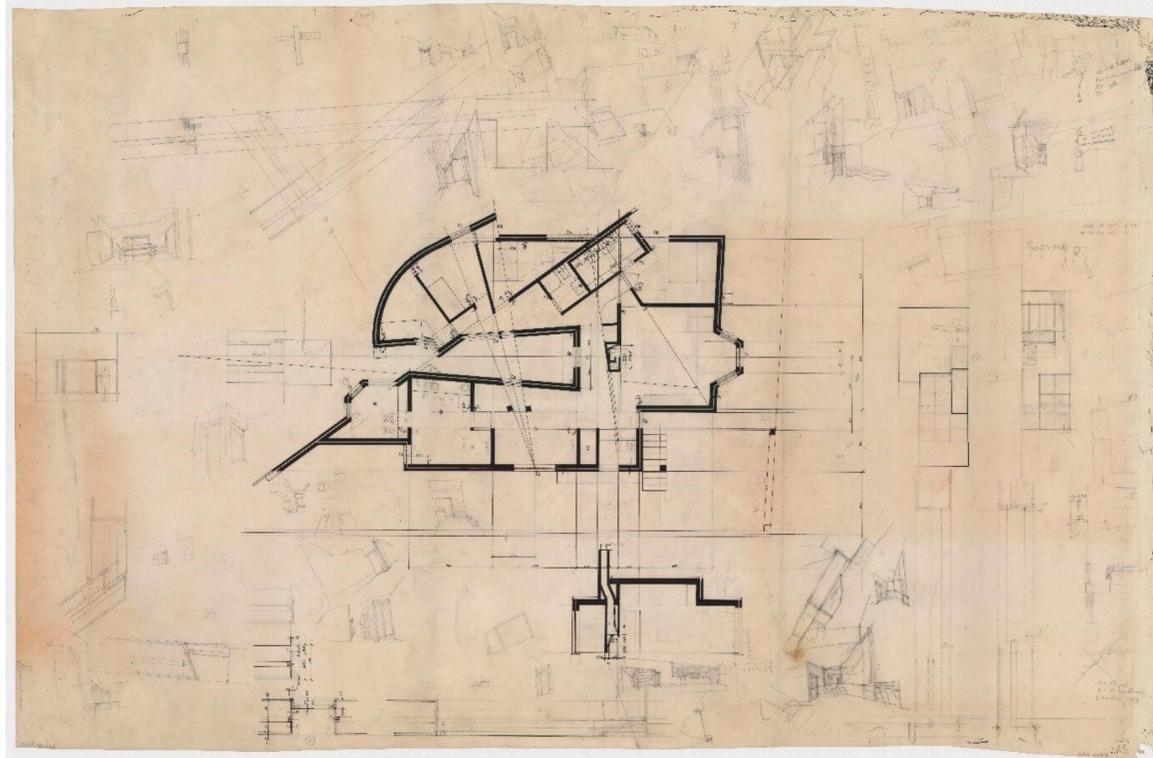


Desta forma obtemos a figura final alinhando parte do pentágonos com os retângulos e com o MIRROR obtenho o objeto final



Novo Trabalho

Planta da Casa António Carlos Siza



Objetivo:

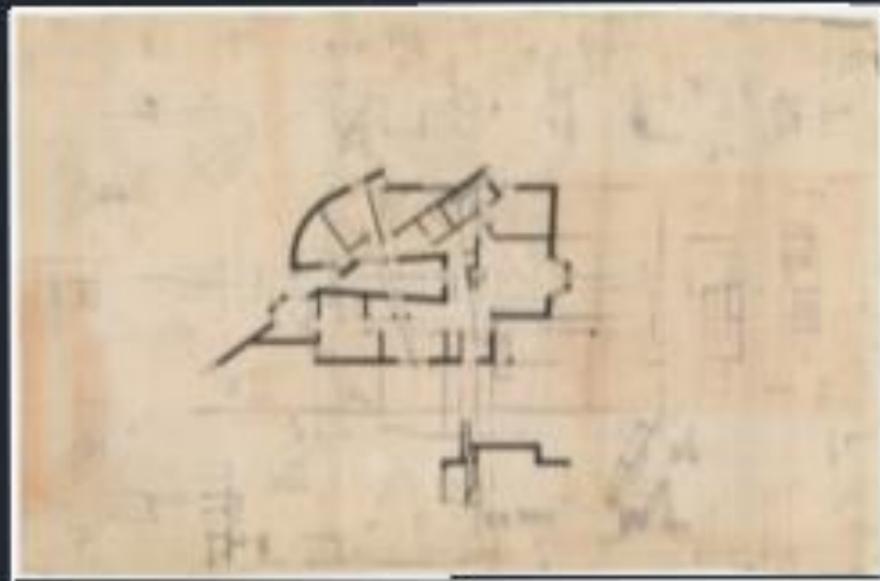
- Representar a planta às escalas 1/100 e 1/10



ReDig

Semana 2

Planta da Casa António Carlos Siza

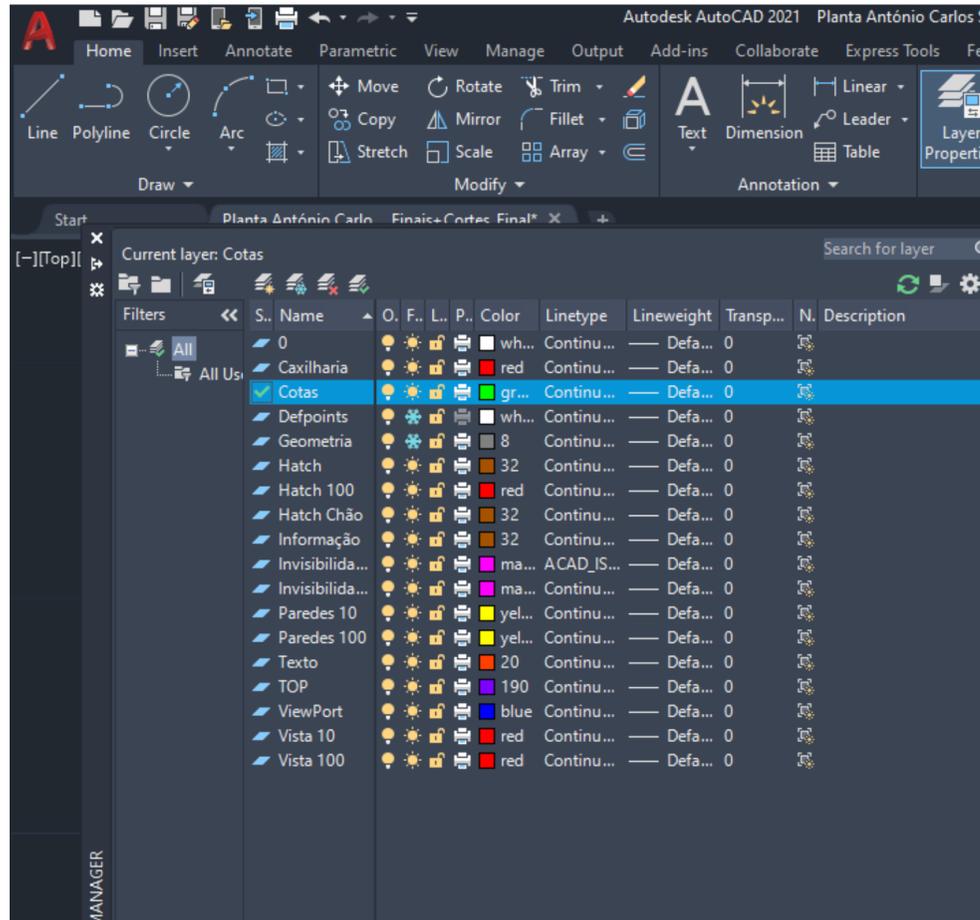


ATTATCH – Para inserir a imagem no autocad

SCALE – Para escalar a imagem através de uma medida geral que no caso foi a cama com comp. de 2m

ALIGN – Para alinhar a imagem de forma a que se consiga traçar linhas retas

Planta da Casa António Carlos Siza



Criação de layers para o trabalho:

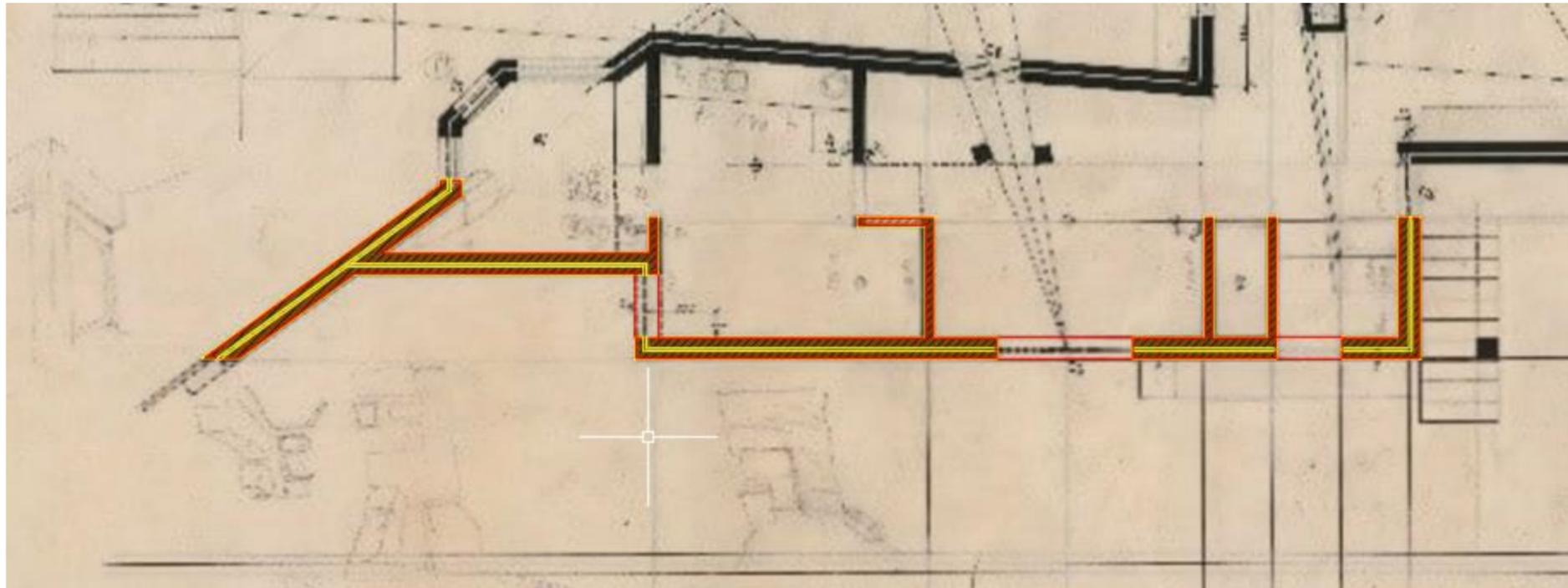
- Paredes 100
- Paredes 10
- Vistas 100
- Vistas 10
- Geomentria
- Hatch
- Texto

Começar a representar a planta na escala 1/100



Planta da Casa António Carlos Siza

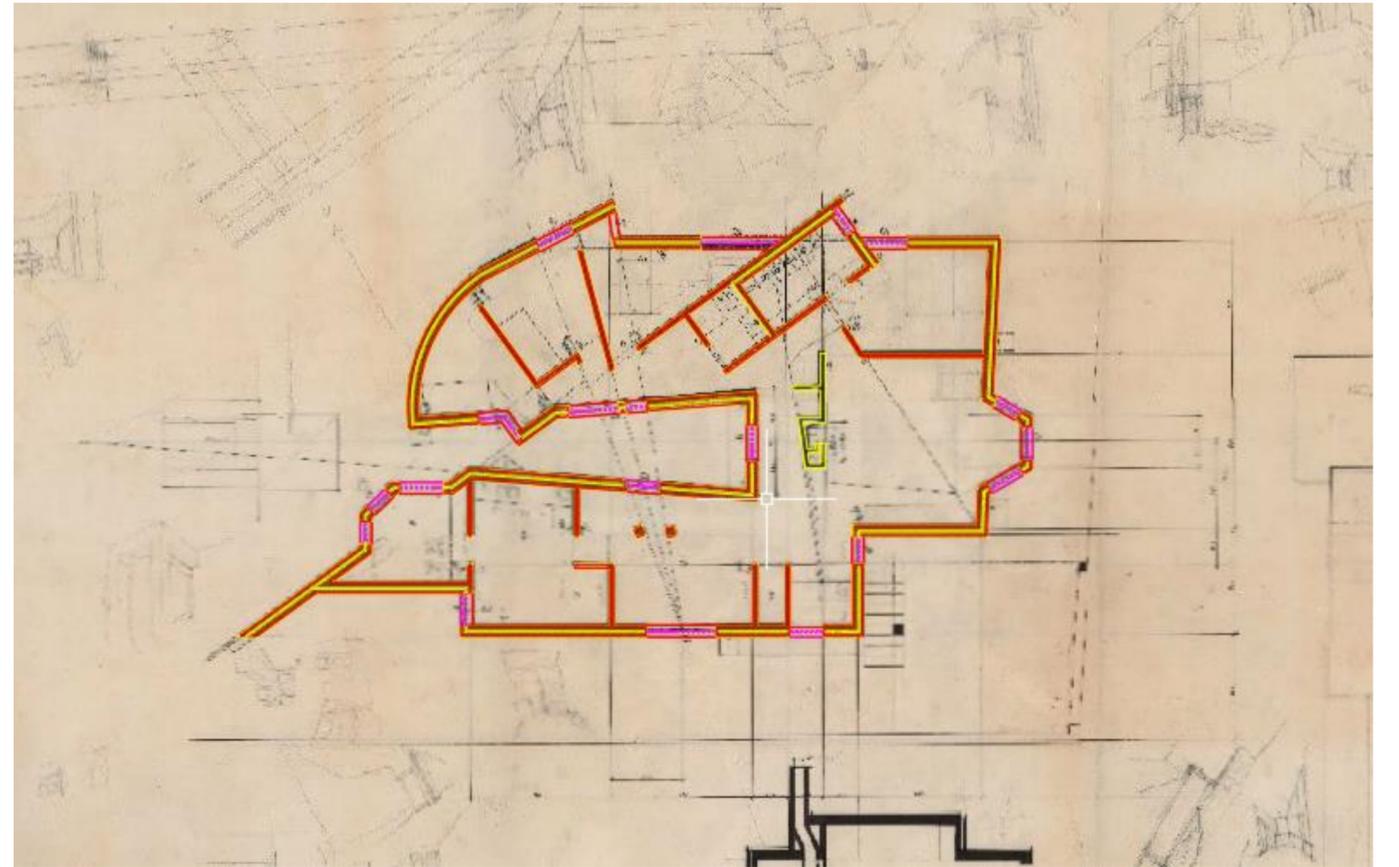
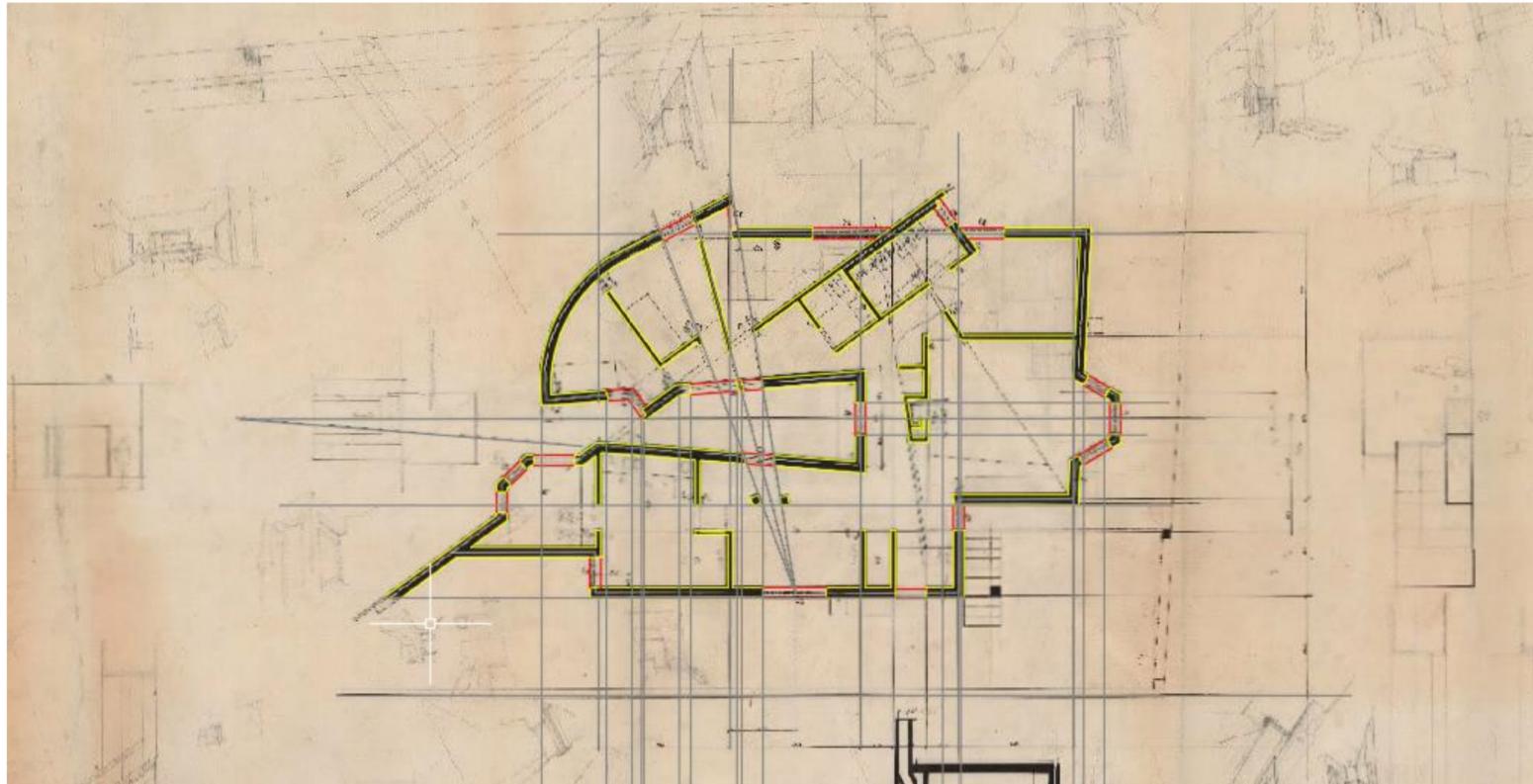
Trabalhar na escala 1/10 sobreposta à escala 1/100



Espessuras para as paredes à escala 1/10

Planta da Casa António Carlos Siza

Progresso da Planta à escala 1/100

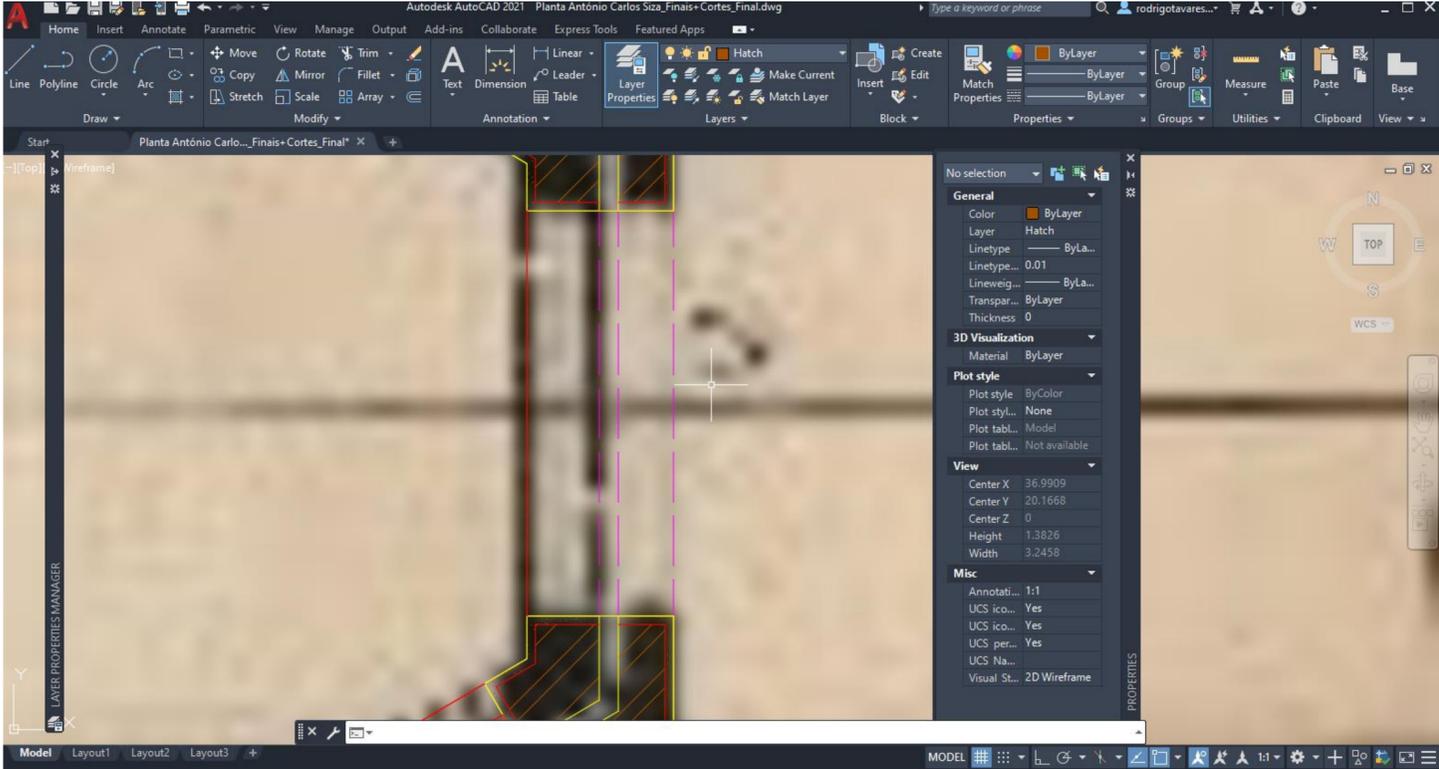


Progresso da Planta à escala 1/10

ReDig

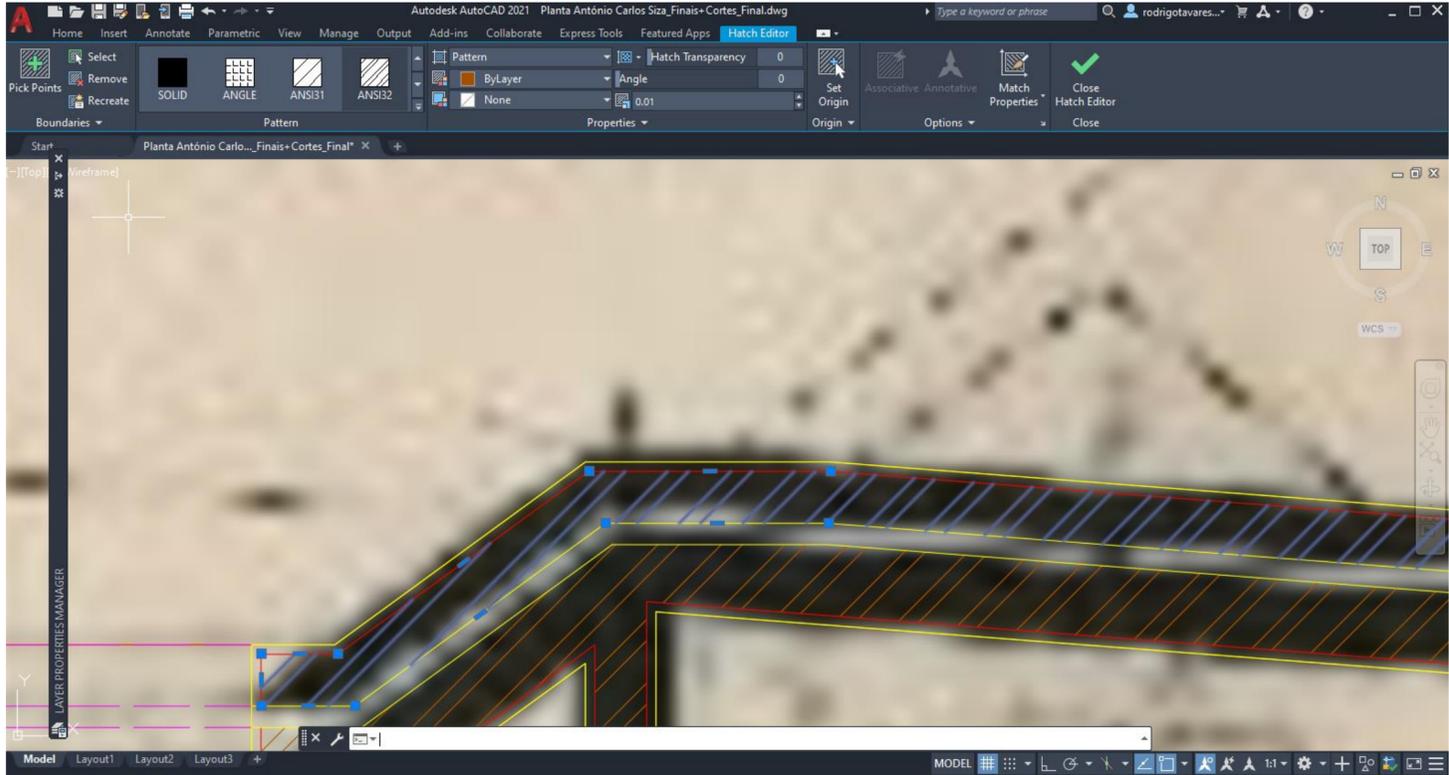
Semana 3

Planta da Casa António Carlos Siza

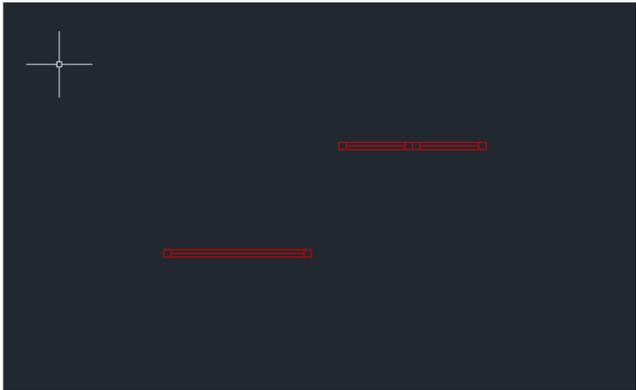


Hatch das paredes:

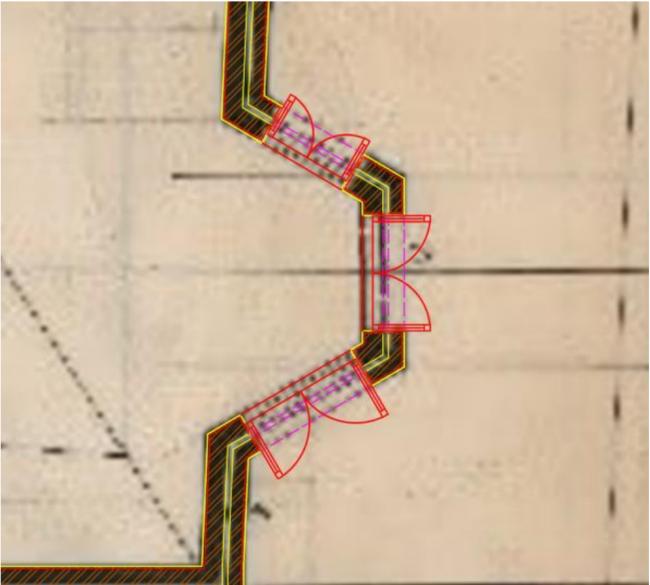
- ANSI32 (Tijolo)
- Ar-Sand (Reboco)



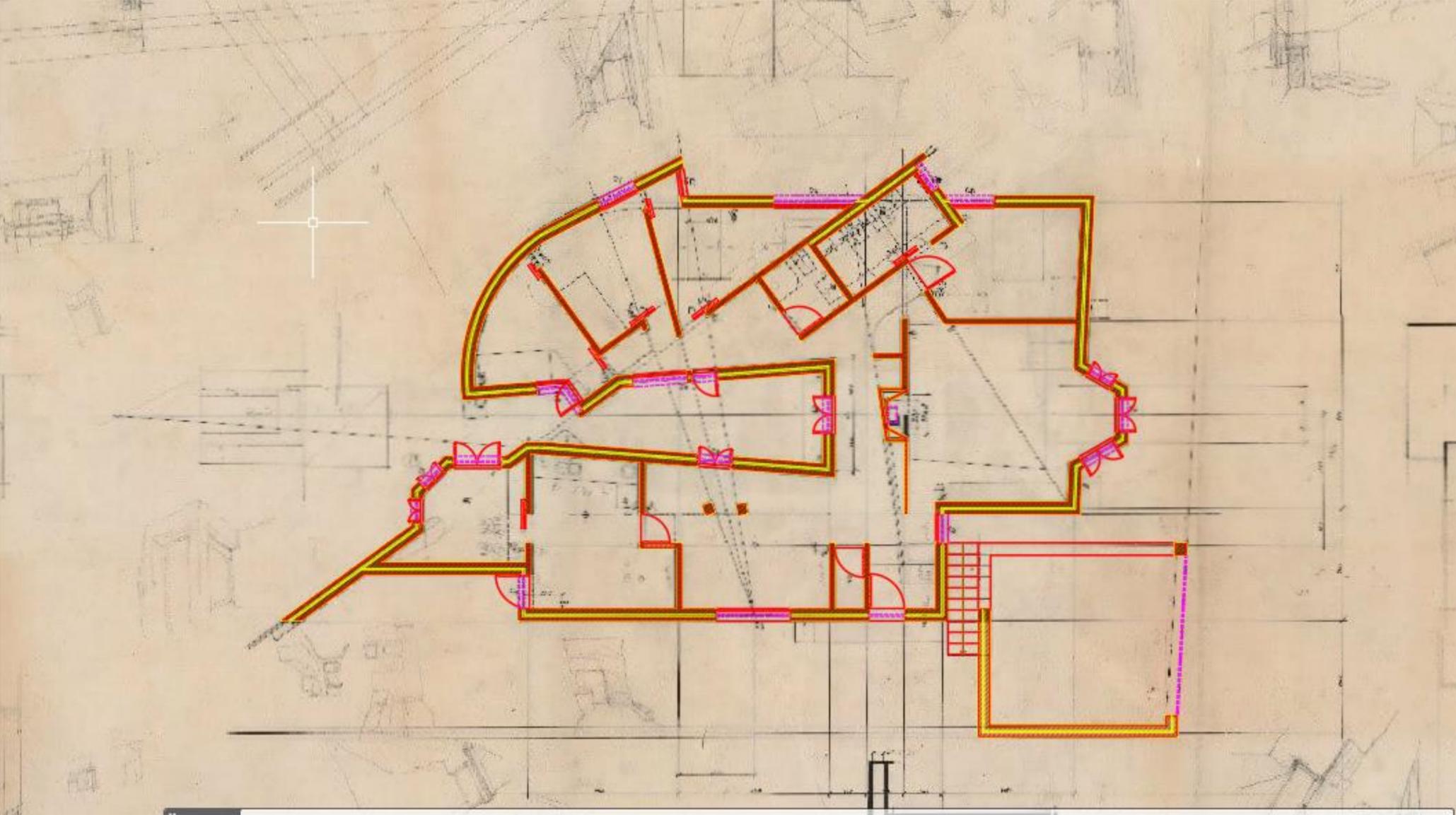
Properties – Linhas Invisíveis



Representação das janelas

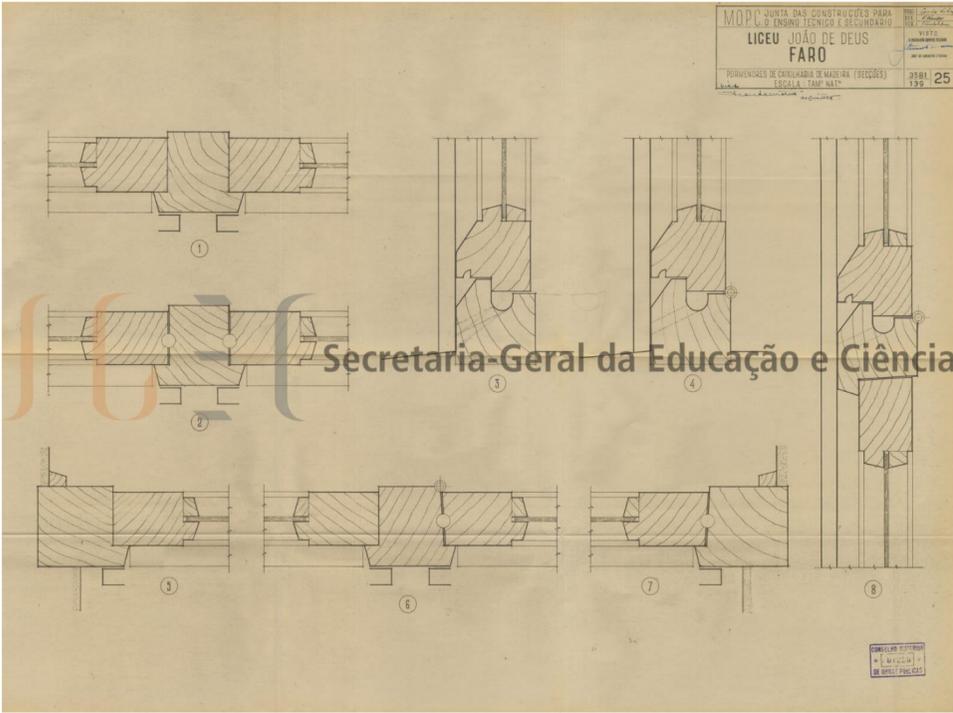


Planta da Casa António Carlos Siza

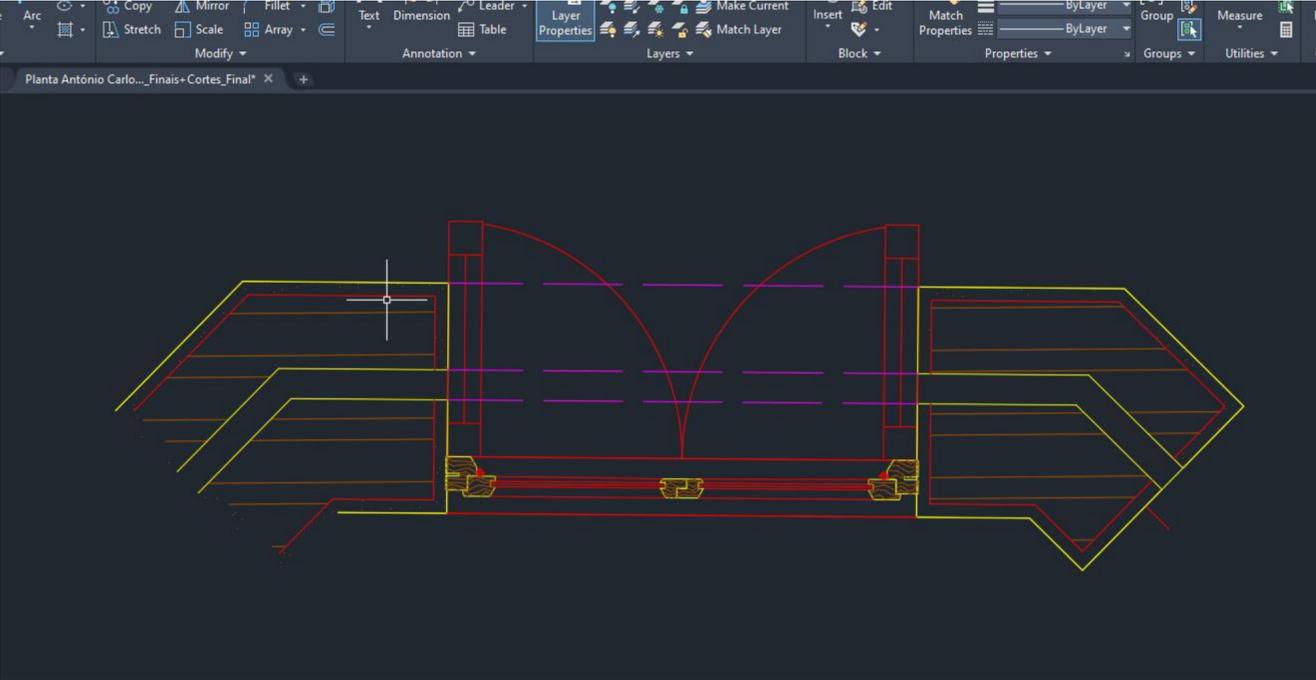
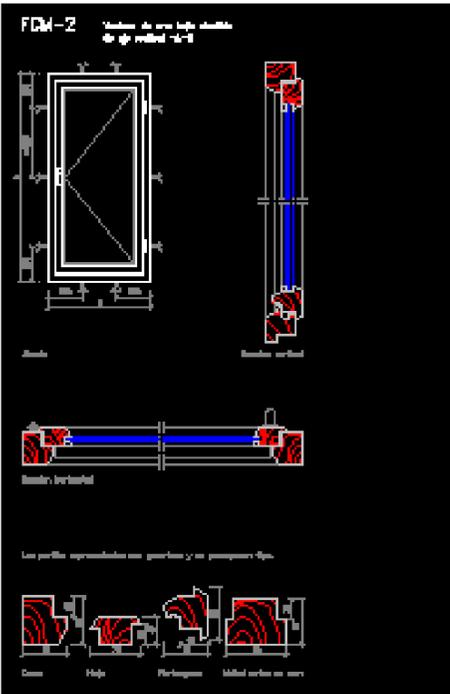


Representação das Plantas final

Planta da Casa António Carlos Siza

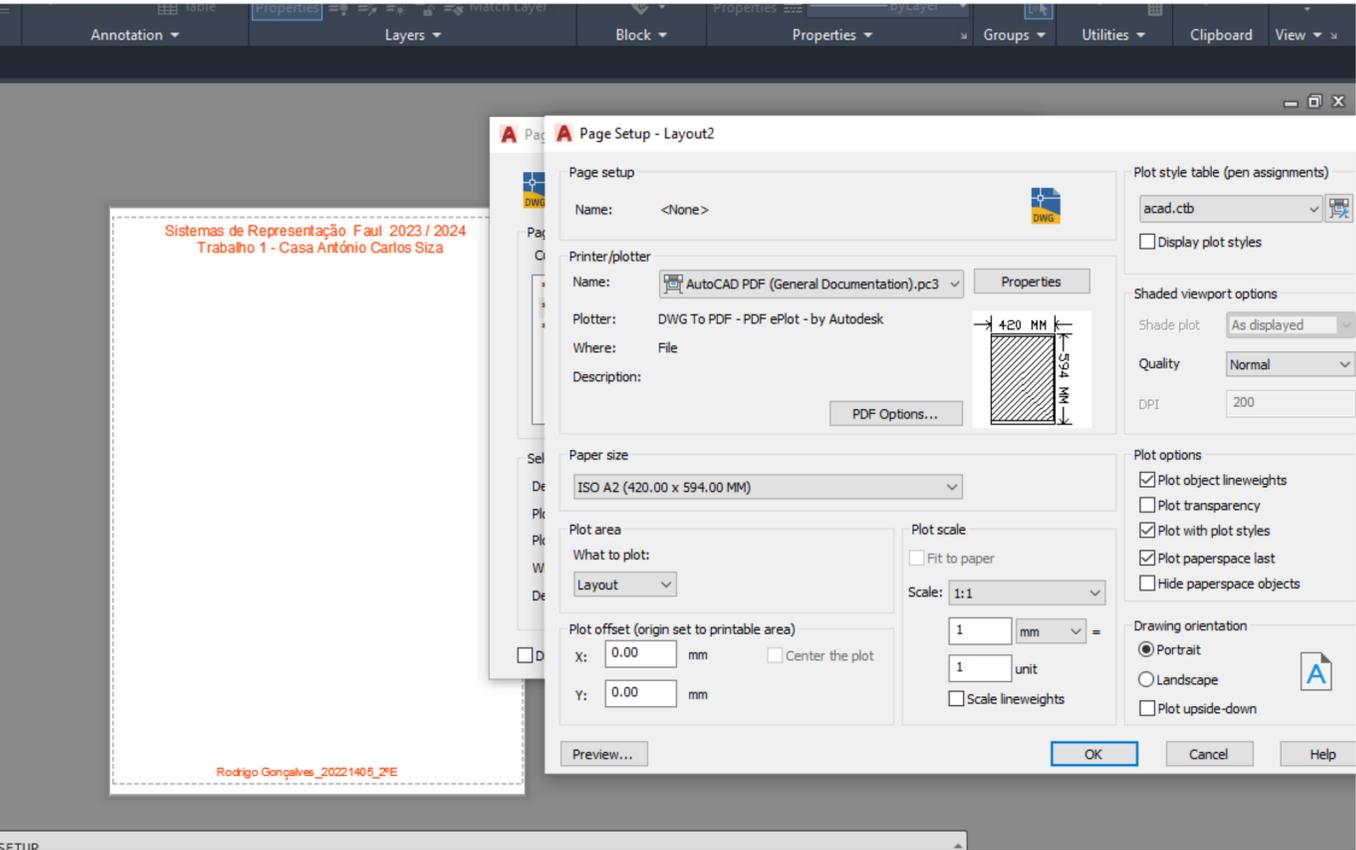


Representação da caxilhe

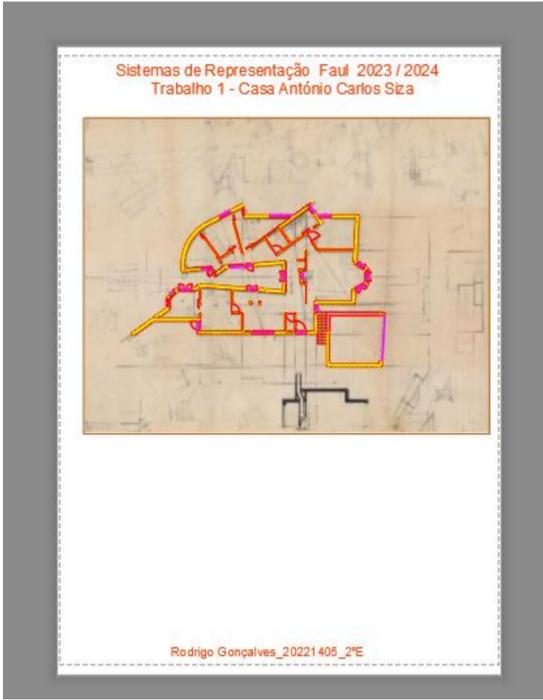


Caxilhe que trabalhei

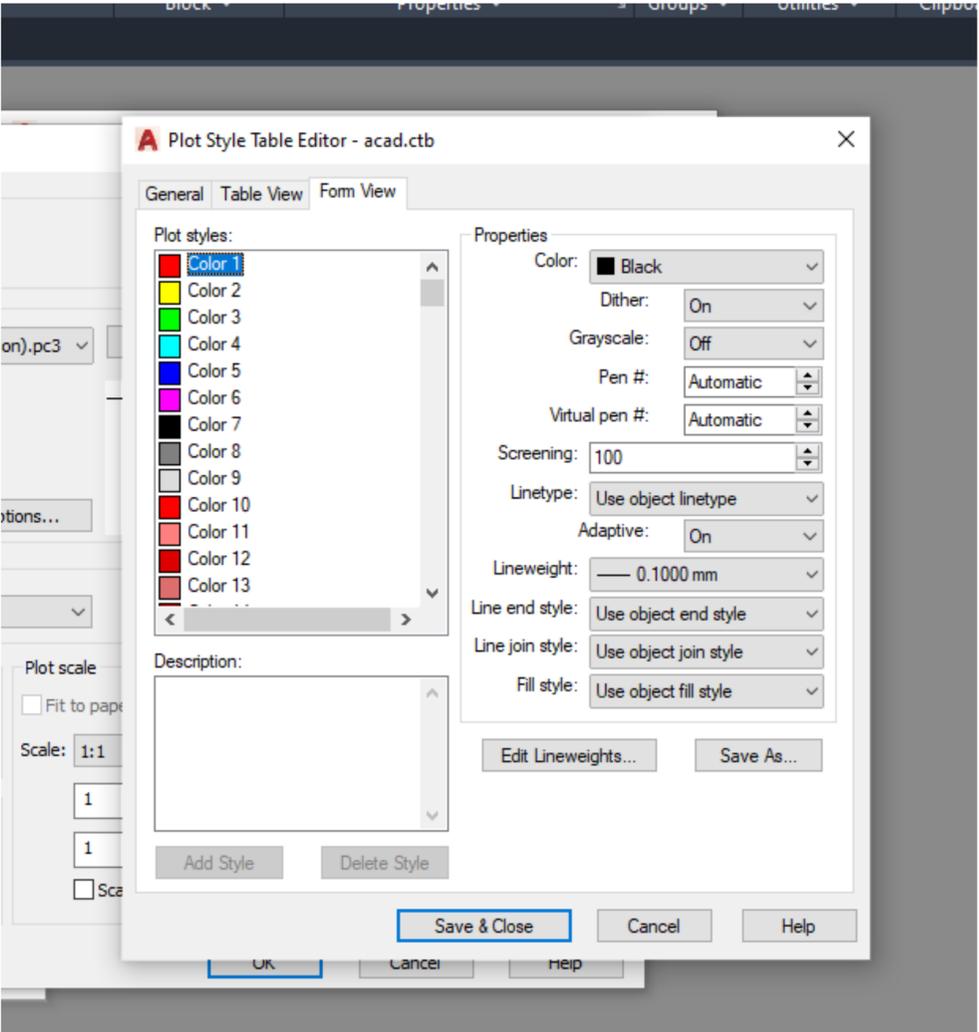
Planta da Casa António Carlos Siza



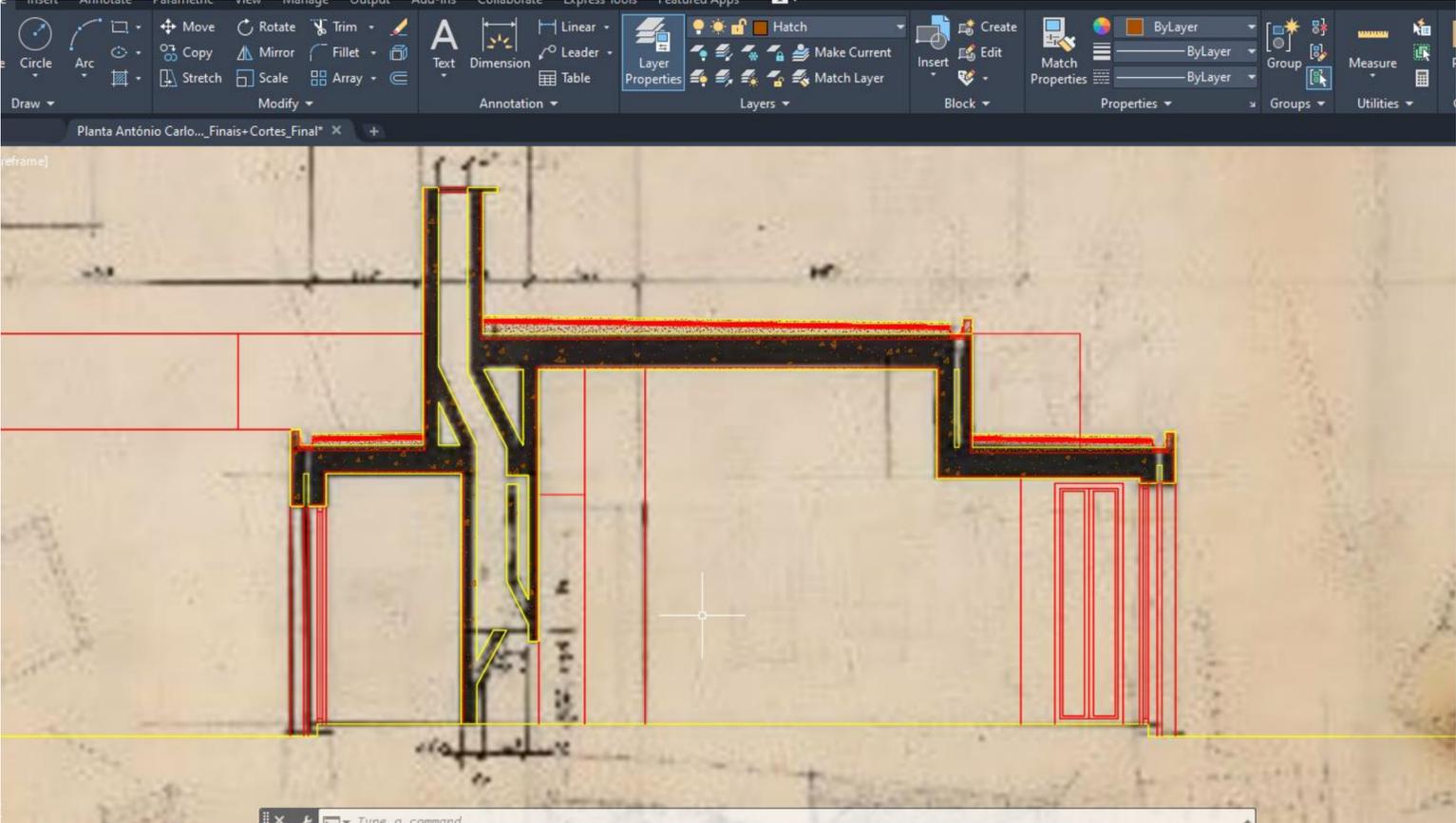
Edição do layout de impressão



Configuração das canetas de impressão

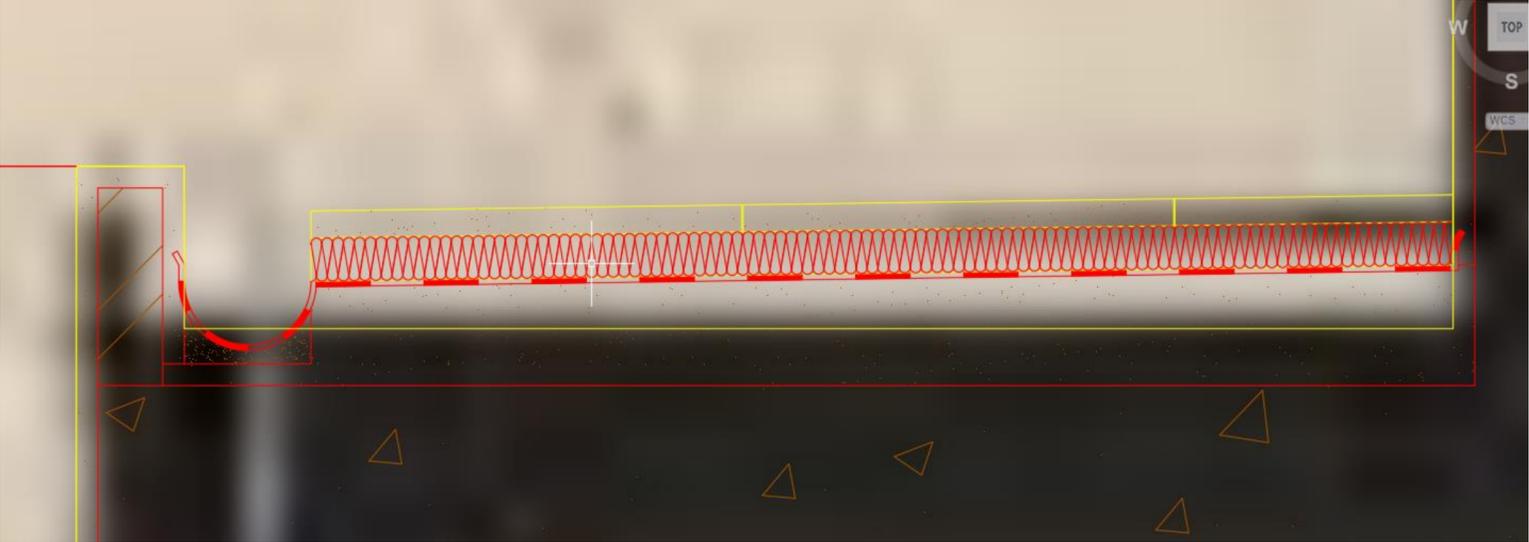


Planta da Casa António Carlos Siza

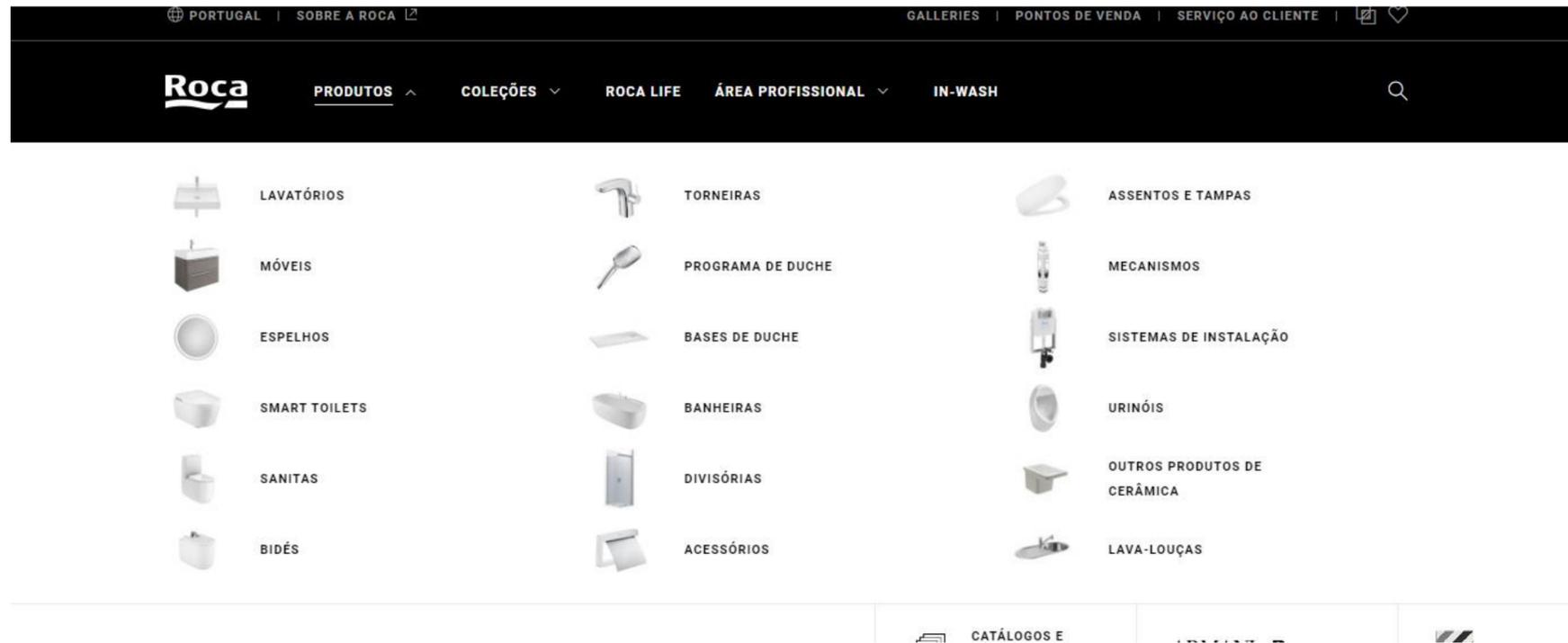


Representação do corte

Pormenor de cobertura no Corte



Onde e como ir buscar as representações dos móveis para a casa



DESCRIÇÃO CARACTERÍSTICAS INFORMAÇÃO TÉCNICA

← VOLTAR

← RESULTADO 1 DE 24 →

INÍCIO / PRODUTOS / LAVATÓRIOS / LAVATÓRIOS MURAIS

INSPIRA
REF: A32752A000

SQUARE - Lavatório mural com jogo de fixação

MEDIDAS:
1000 x 490 x 120 mm
(COMPRIMENTO, LARGURA, ALTURA)

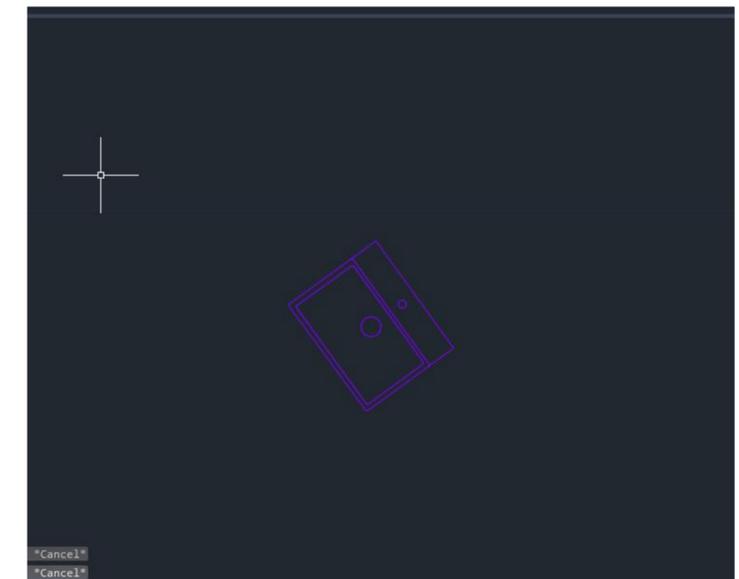
[FICHA DE PRODUTO \(PDF\)](#)

[VER MEDIDAS COMPLETAS](#)

00 - BRANCO

ONDE COMPRAR

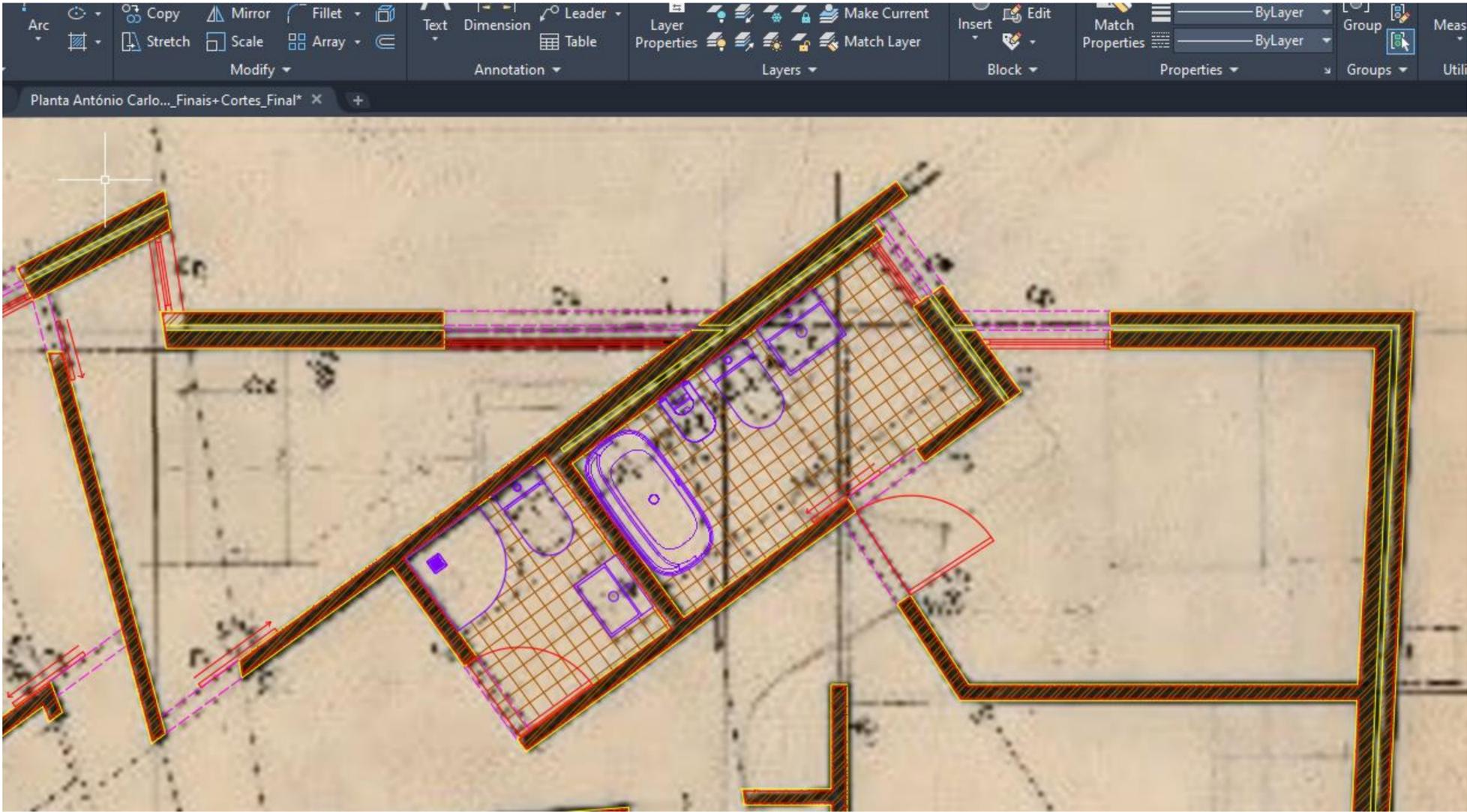
PRVP (sem IVA) 416,00 €



ReDig

Semana 6

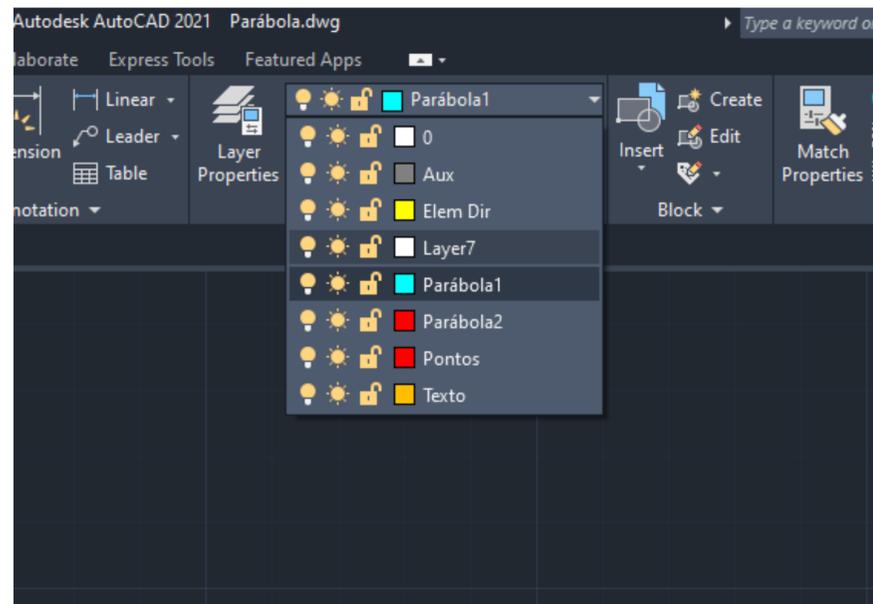
Planta da Casa António Carlos Siza



ReDig

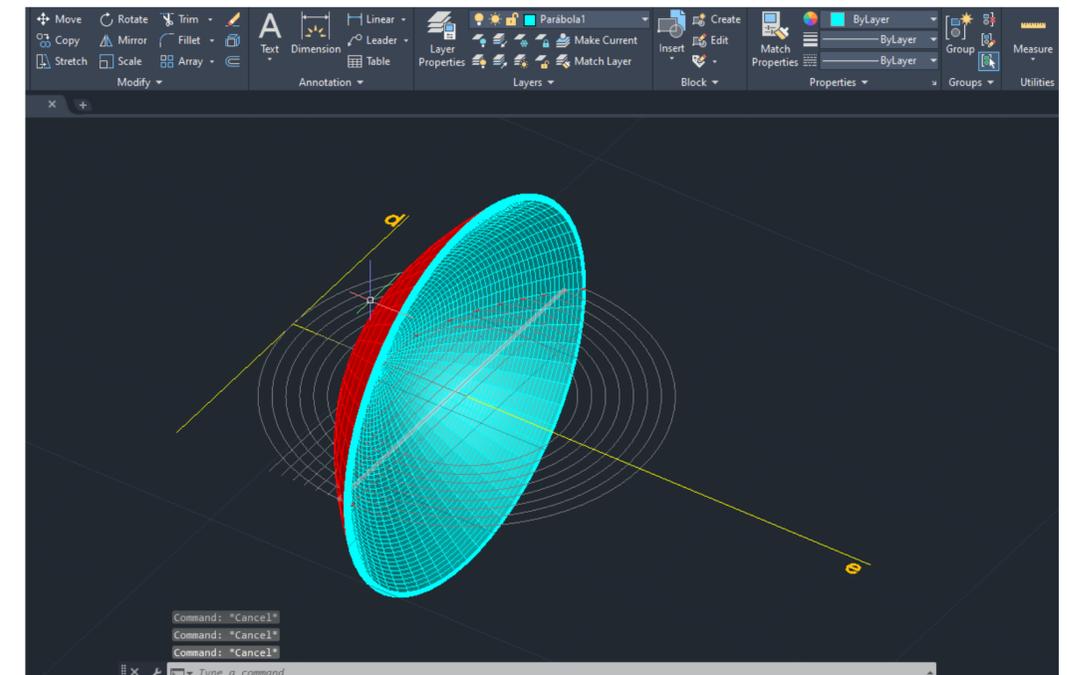
Semana 6

Parábola

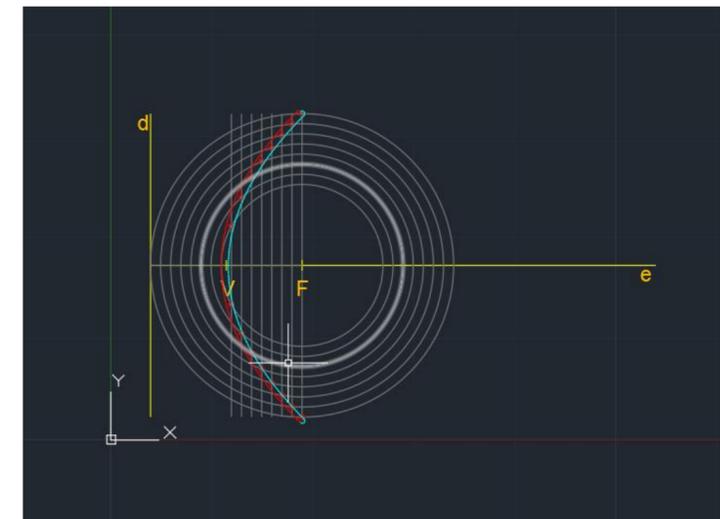
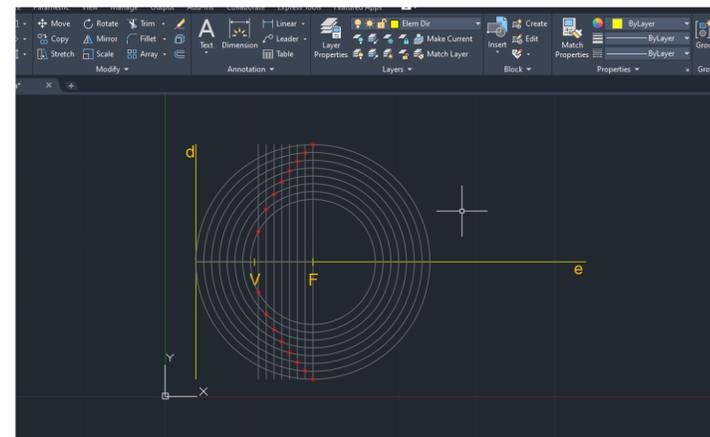
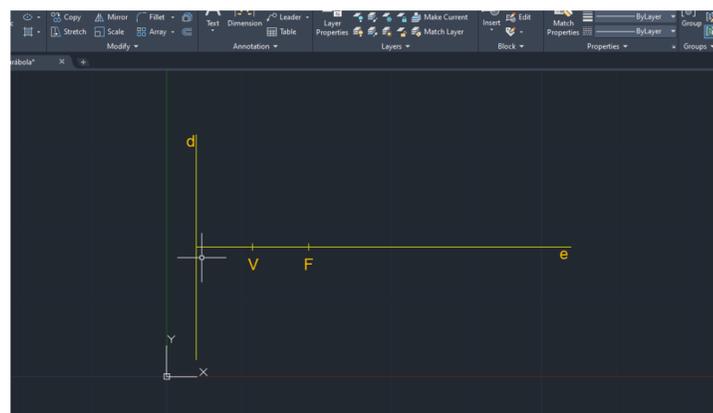


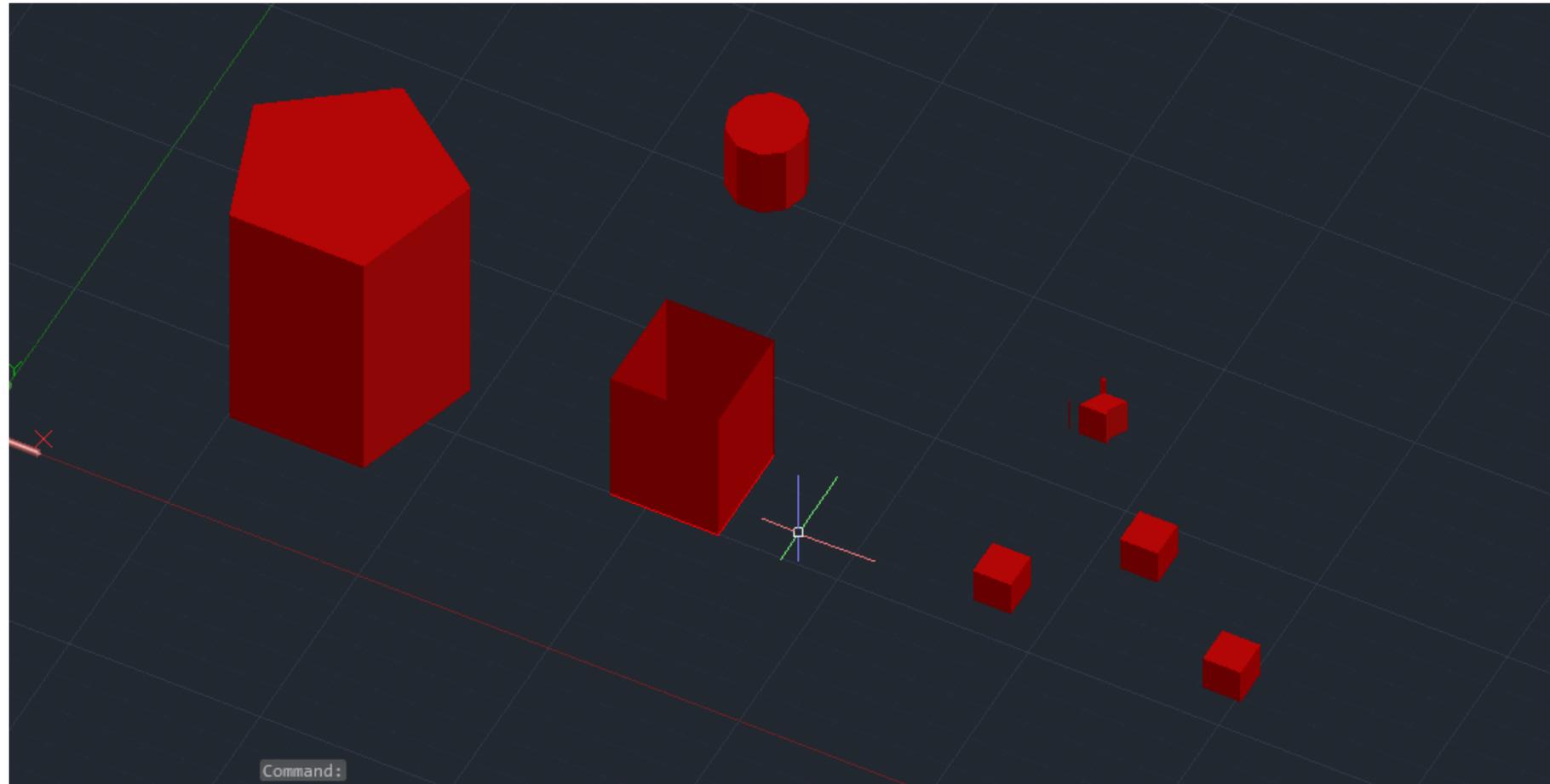
Novos Comandos:

- Pedit
- Orbit
- RevSurf
- SurfTab 1
- SurfTab2
- Shade



Criação de layers necessários

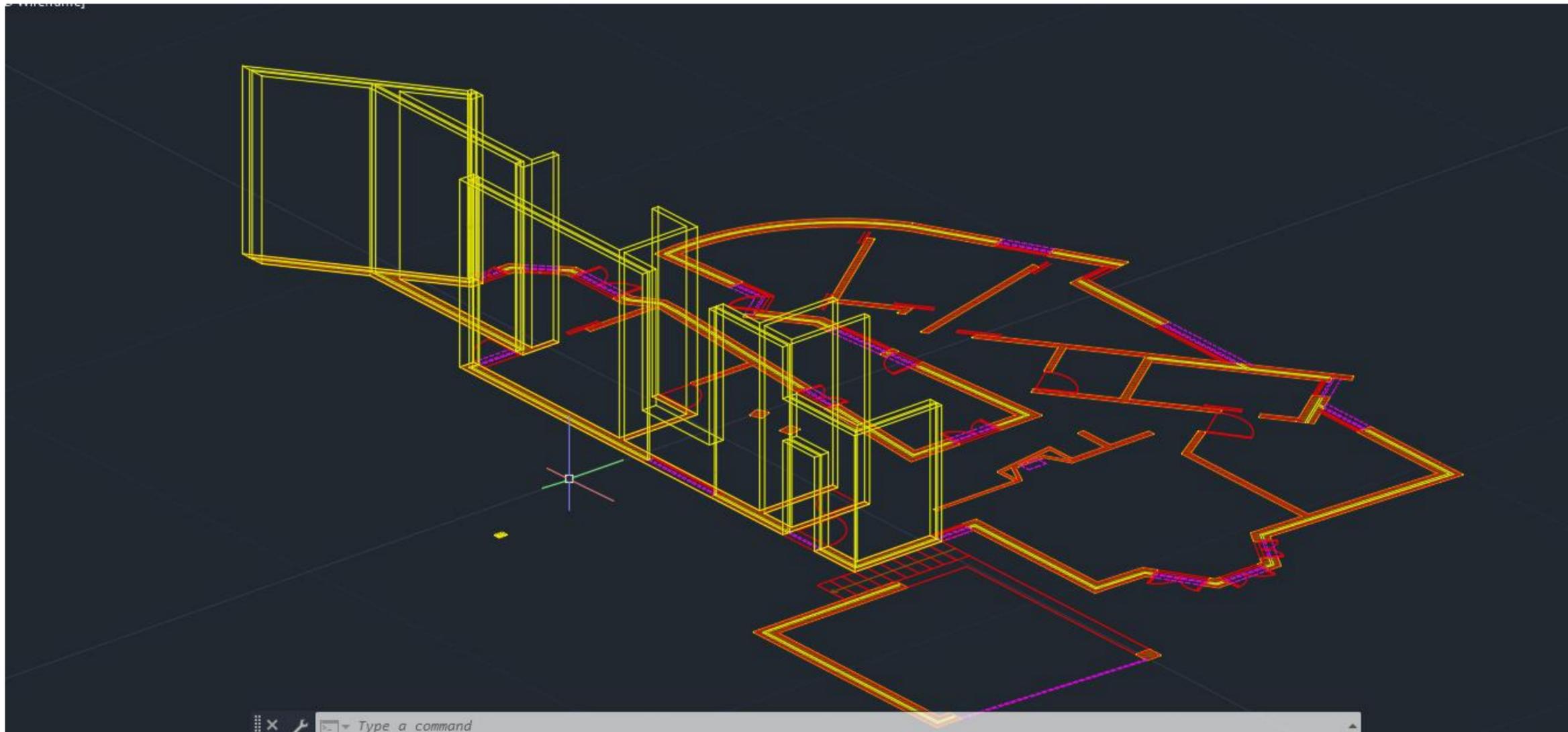




Novos Comandos:

- Polygon
- Extrude
- Hidden
- Subtract
- Union
- Intersect

Extrusão da planta do trabalho anterior



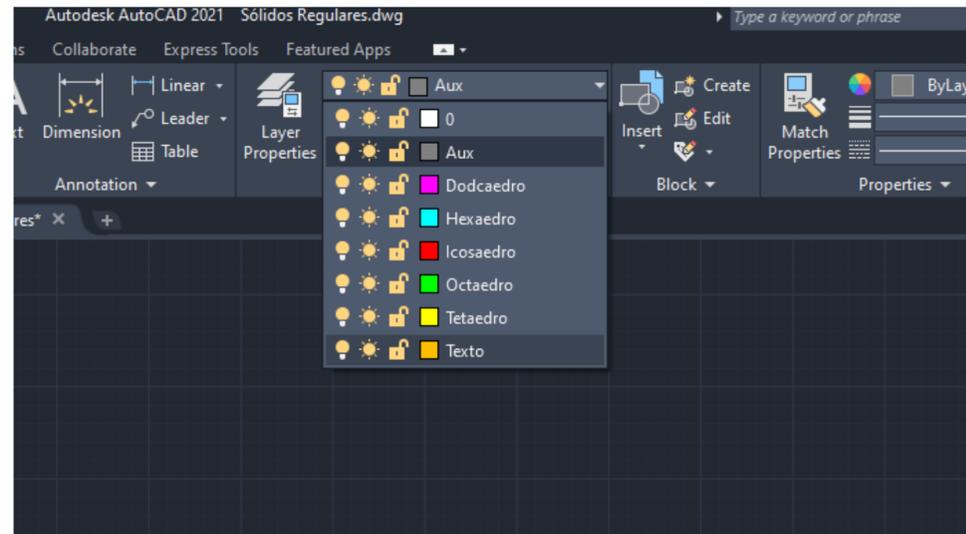
Realizar um modelo da casa em 3d

Extrusão das paredes

ReDig

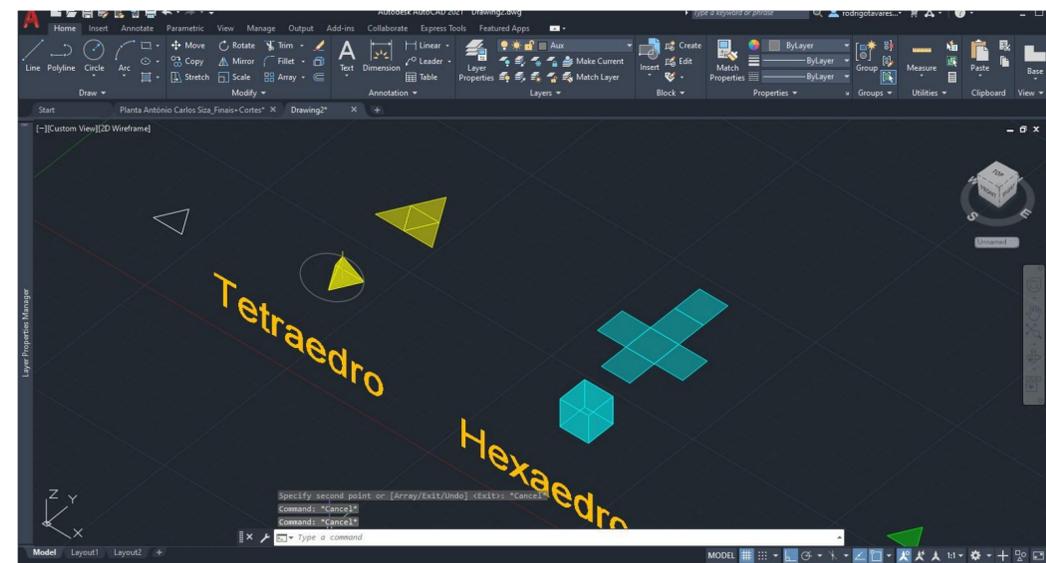
Semana 7

Construção de Sólidos

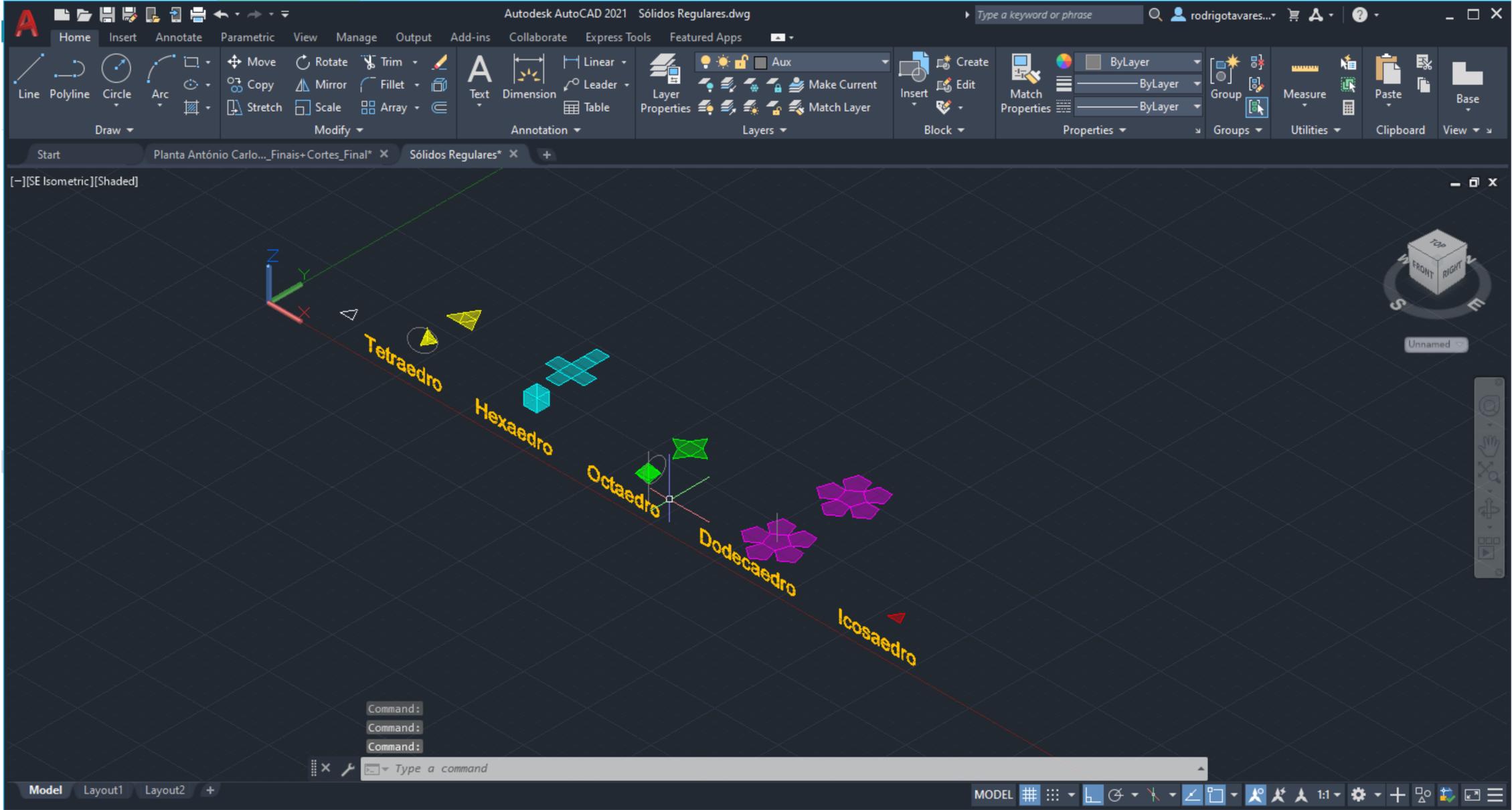


Novos Comandos:

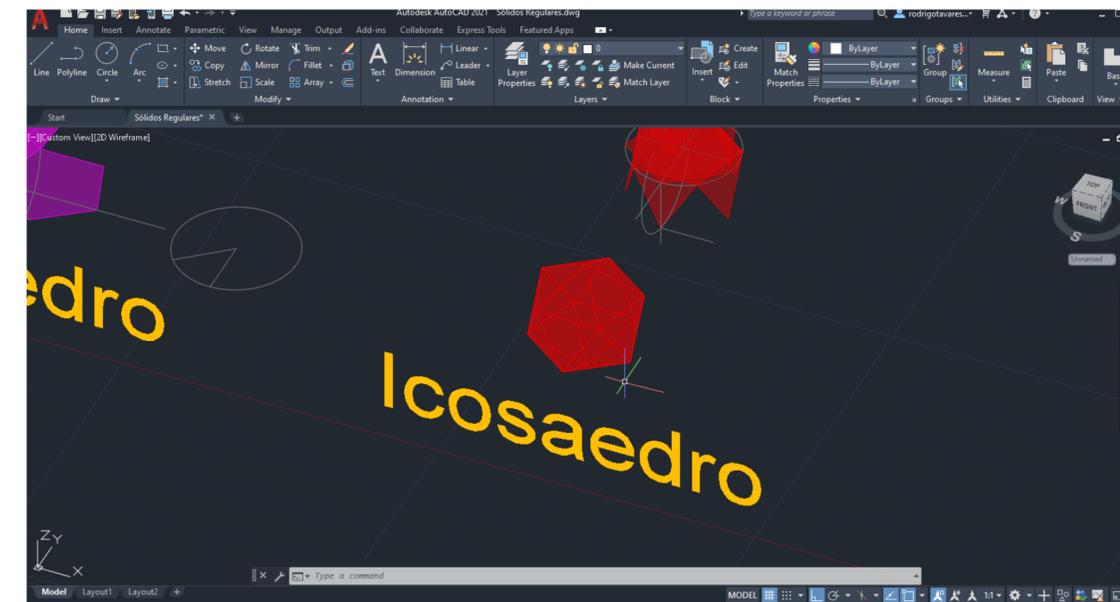
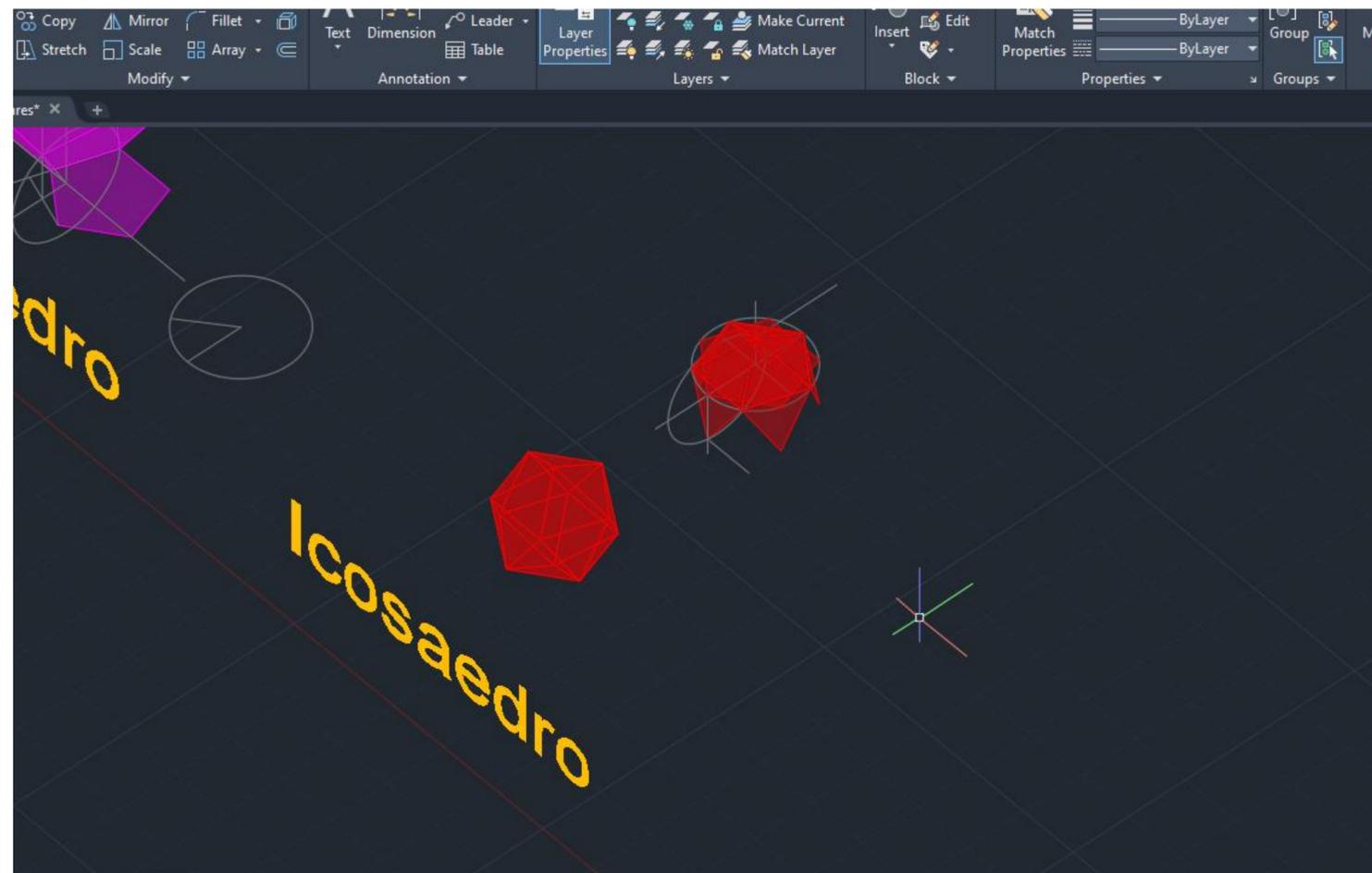
- 3DRotate
- Rotate3D
- Array



Construção de Sólidos



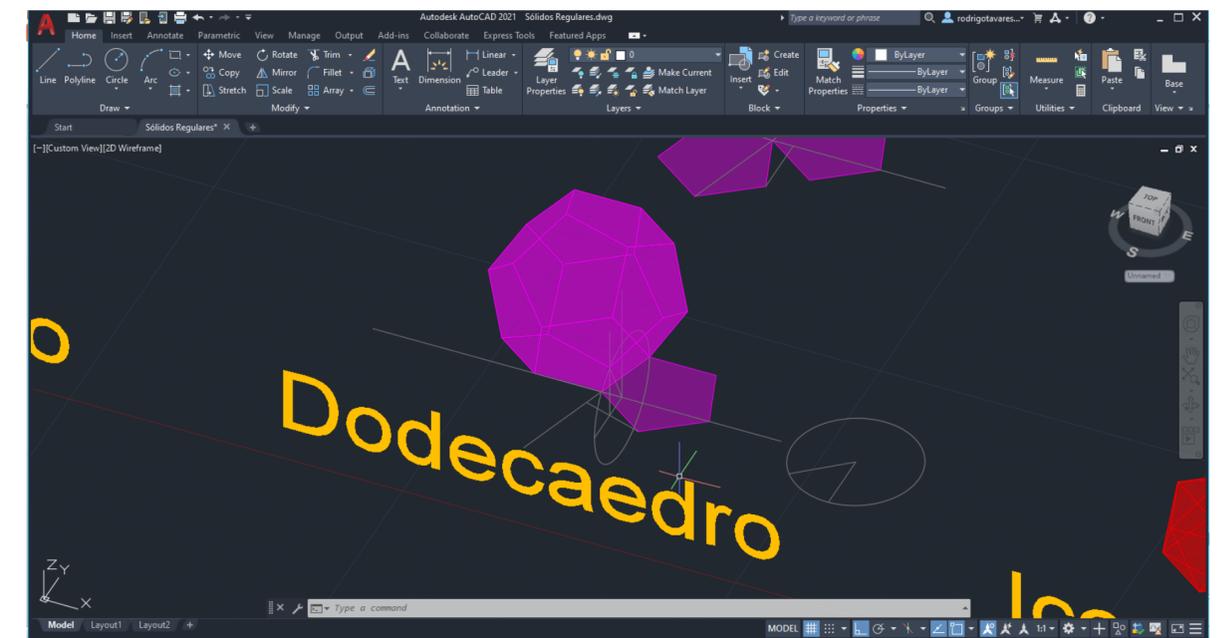
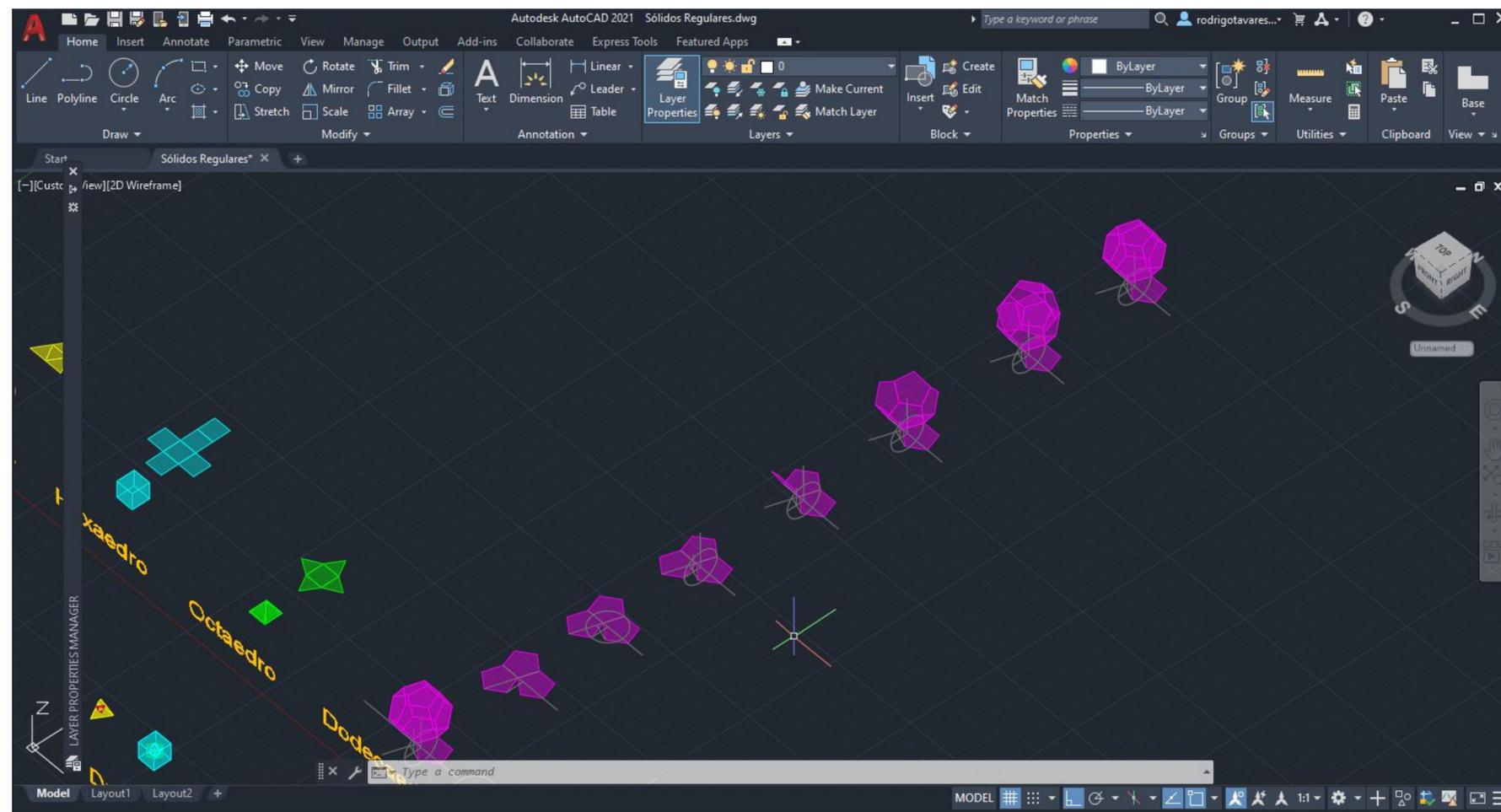
Construção de Sólidos



Comandos Novos:

- 3DMirror
- 3DArray

Construção de Sólidos

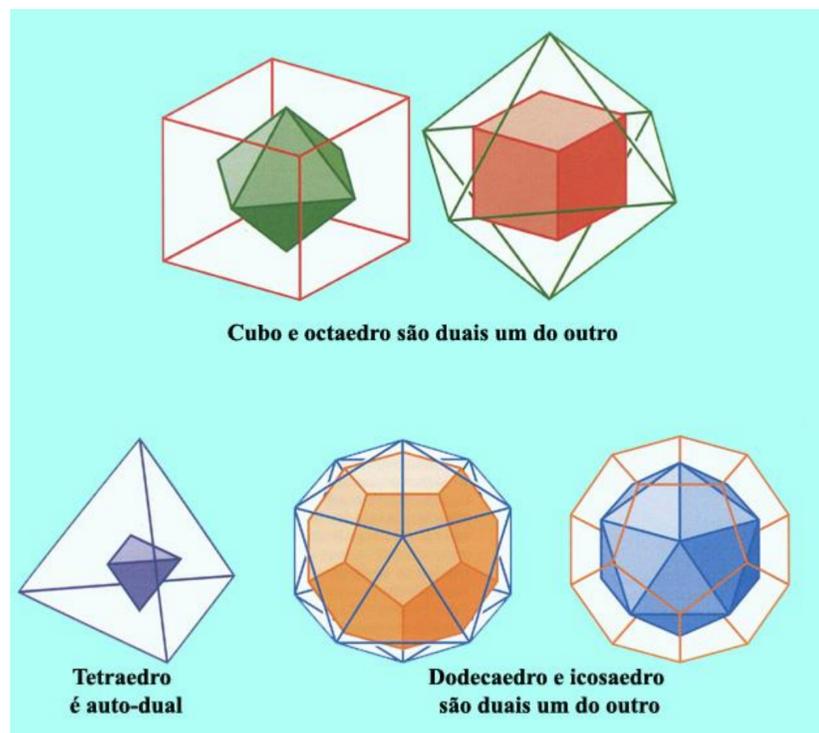


ReDig

Semana 9

Construção de Sólidos

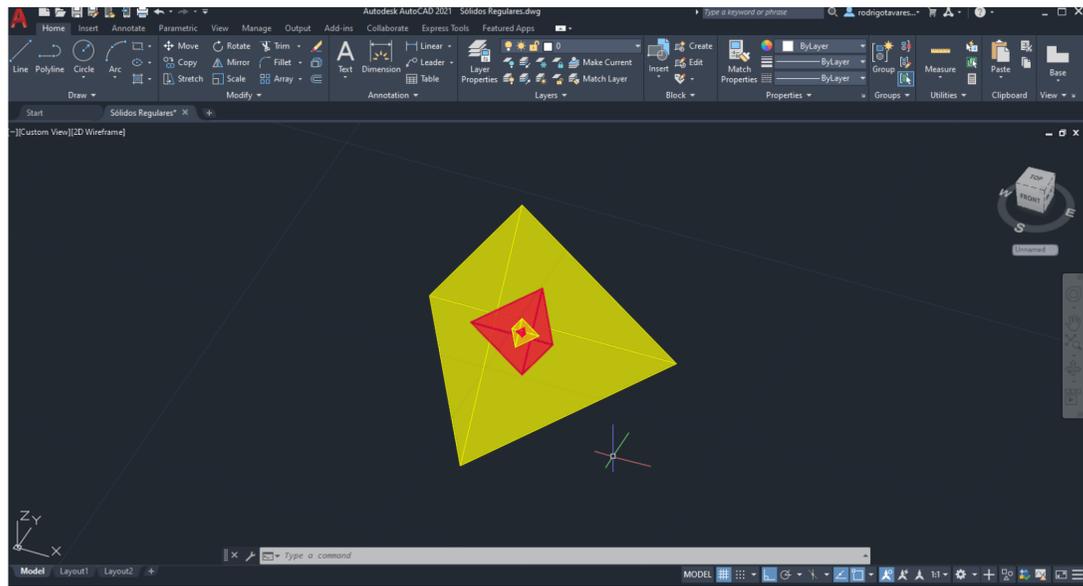
Com a construção dos sólidos foi colocada o exercício de coloca-los uns dentro dos outros, de forma a gerar os duais.



Nome	Imagem	Faces	Arestas	Vértices	Vértices por face	Encontros de faces em cada vértice	Configuração vértices	Grupo de Simetria
tetraedro		4	6	4	3	3	3.3.3	T_d
cubo (hexaedro)		6	12	8	4	3	4.4.4	O_h
octaedro		8	12	6	3	4	3.3.3.3	O_h
dodecaedro		12	30	20	5	3	5.5.5	I_h
icosaedro		20	30	12	3	5	3.3.3.3.3	I_h

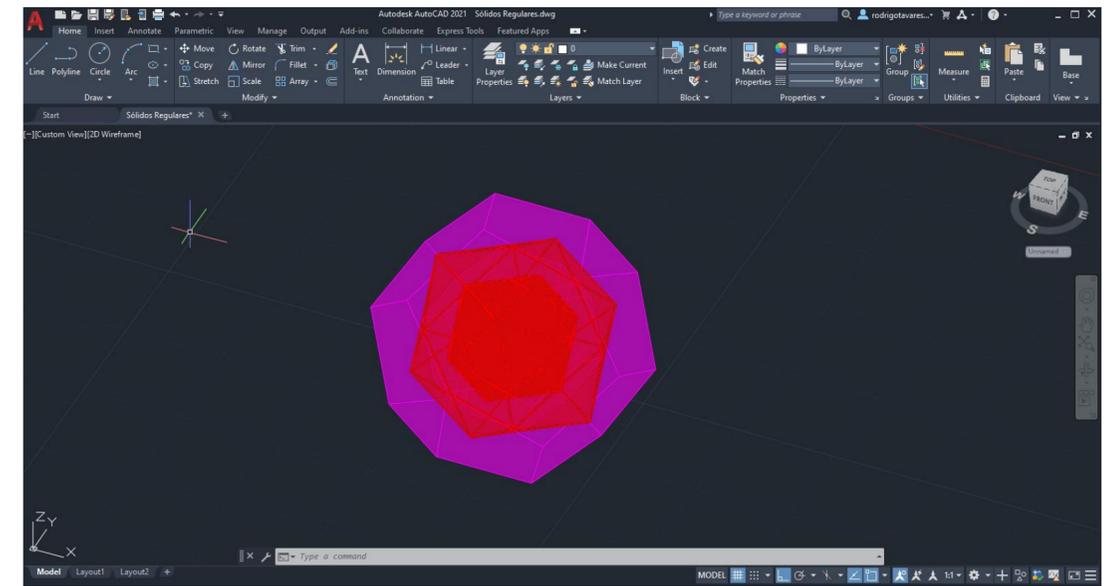
Fiz então uma pesquisa para descobrir quais seriam as relações entre os poliedros e percebi que existe uma relação entre os vértices e as faces de alguns poliedros

Construção de Sólidos

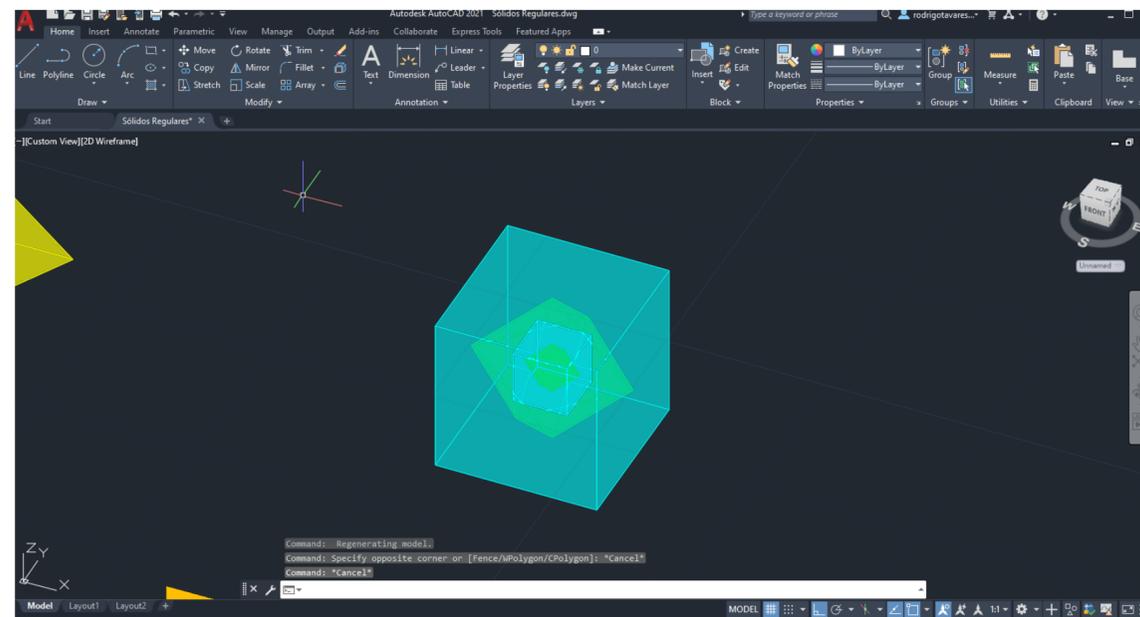


Dual Tetraedro

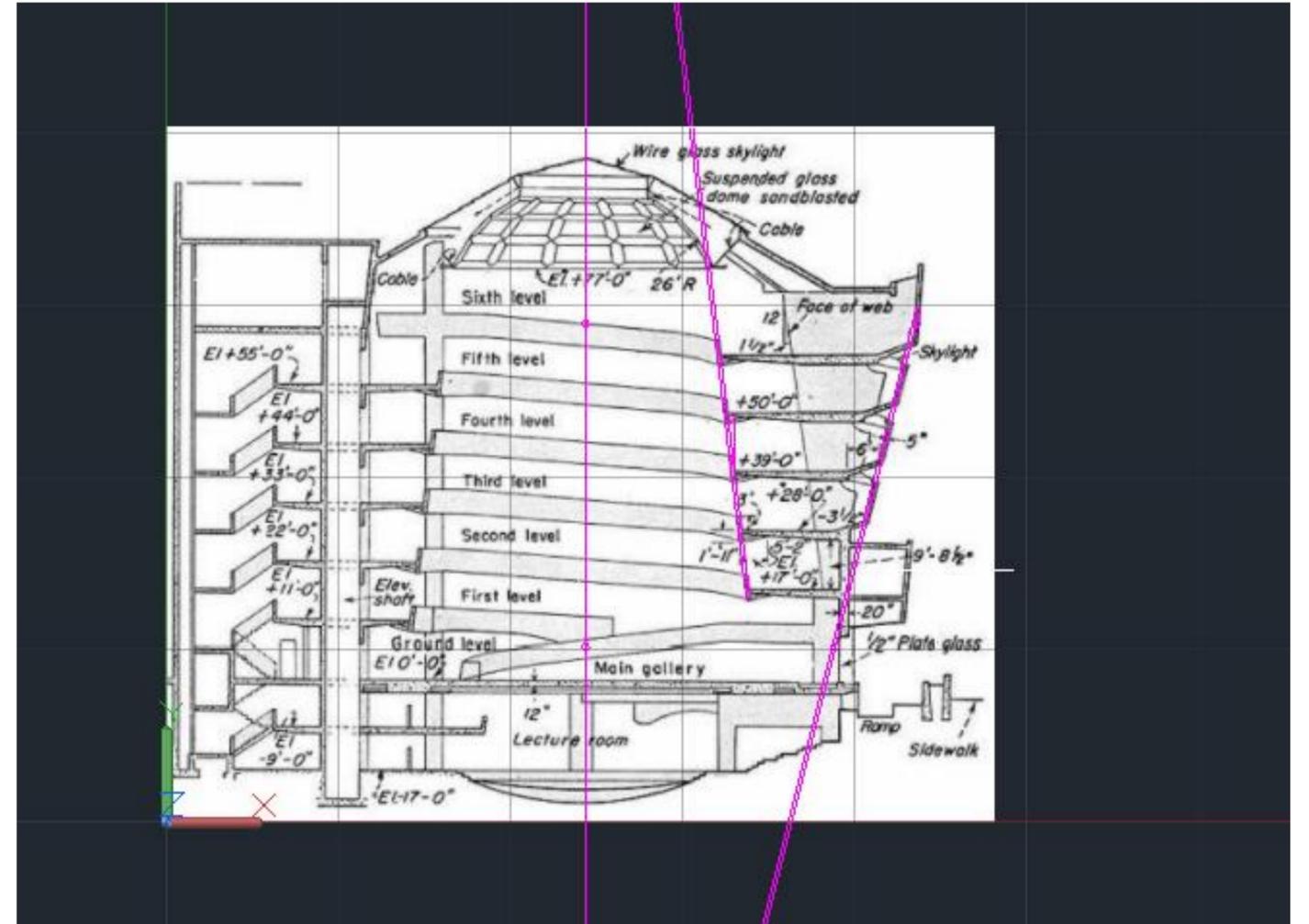
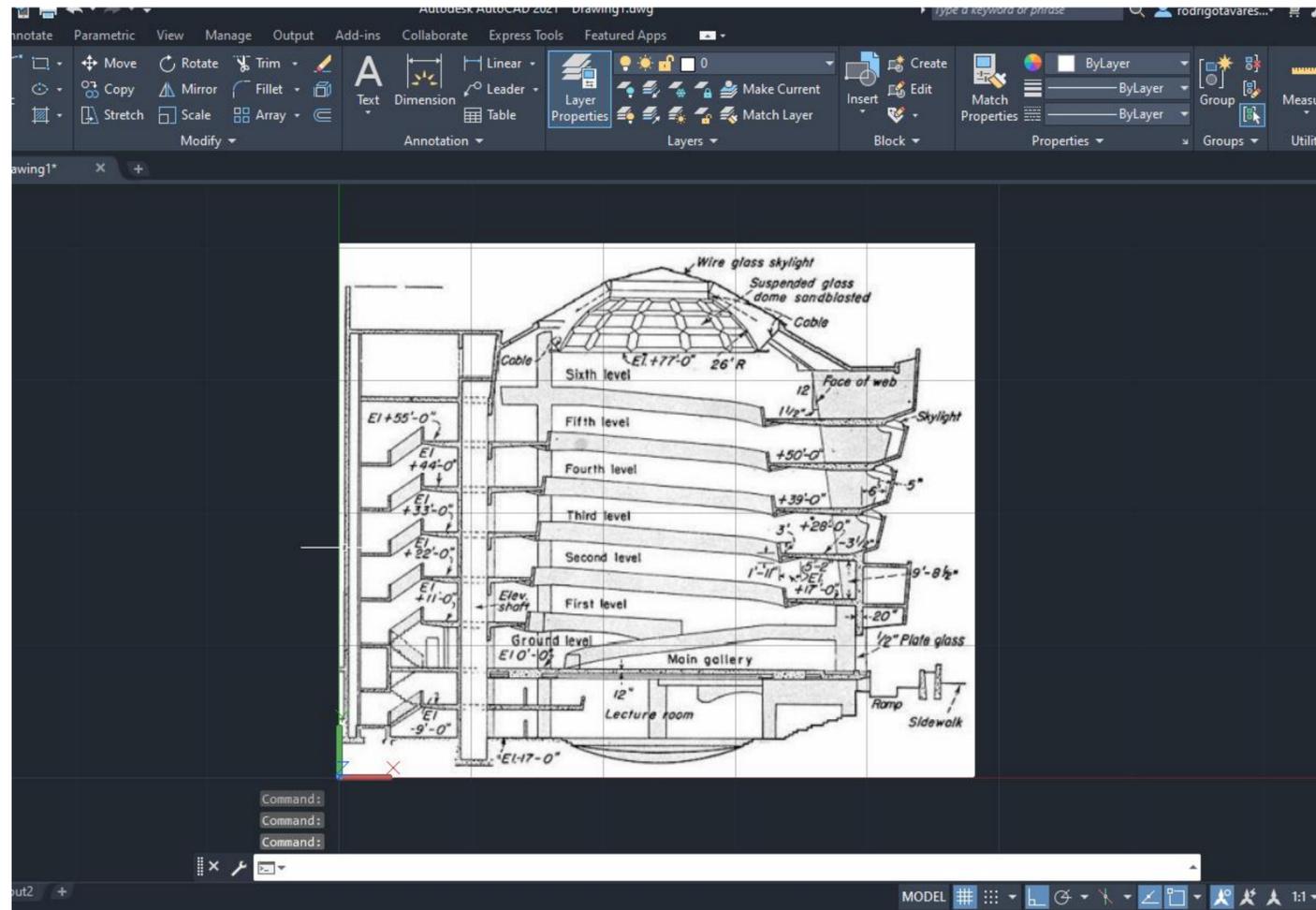
Dual Hexaedro/Octaedro



Dual Dodecaedro/Icosaedro



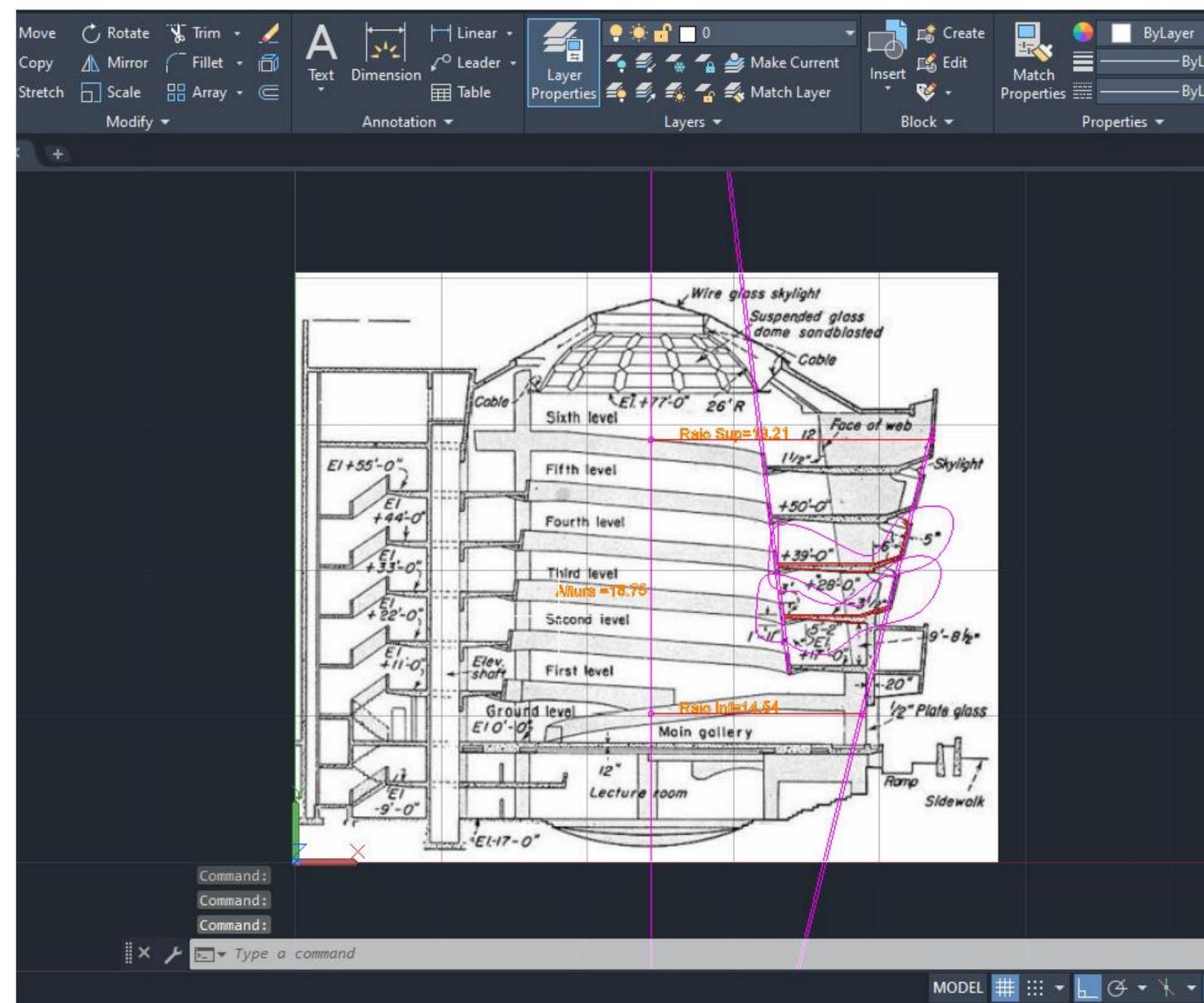
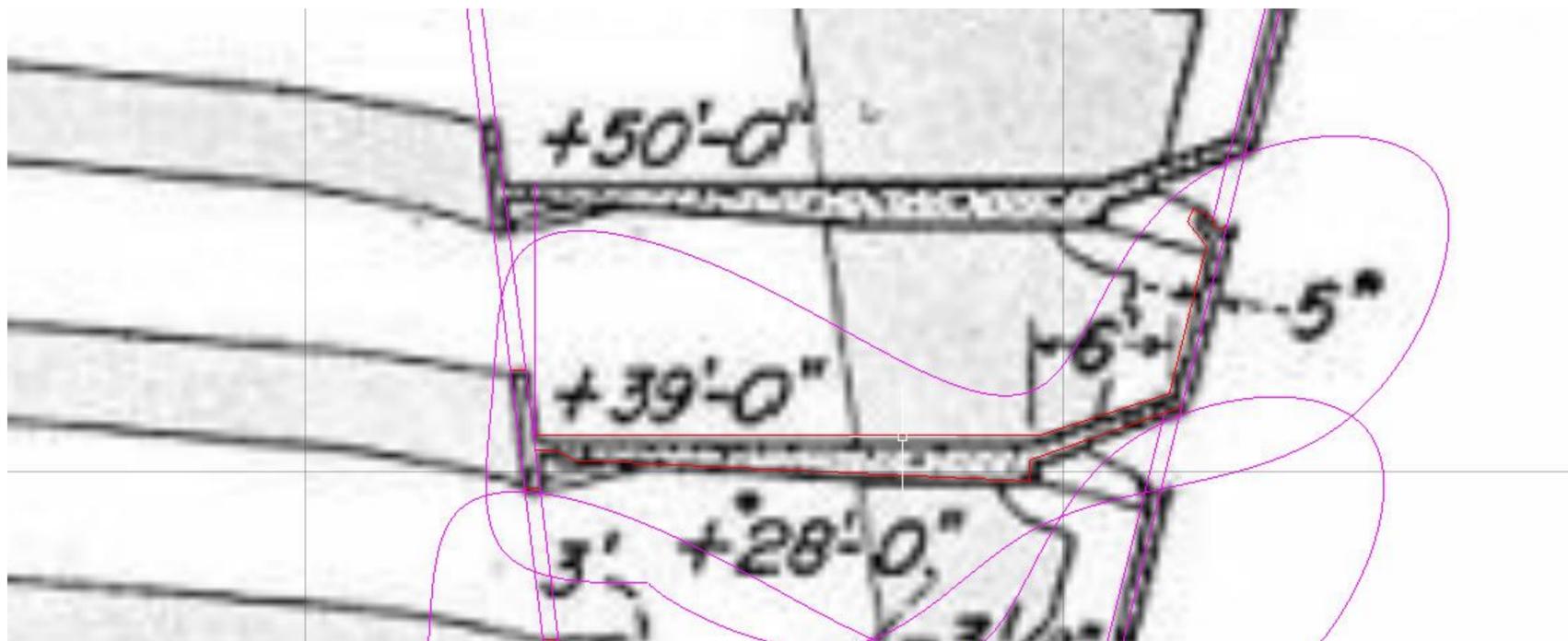
Corte Guggenheim



ReDig

Semana 10

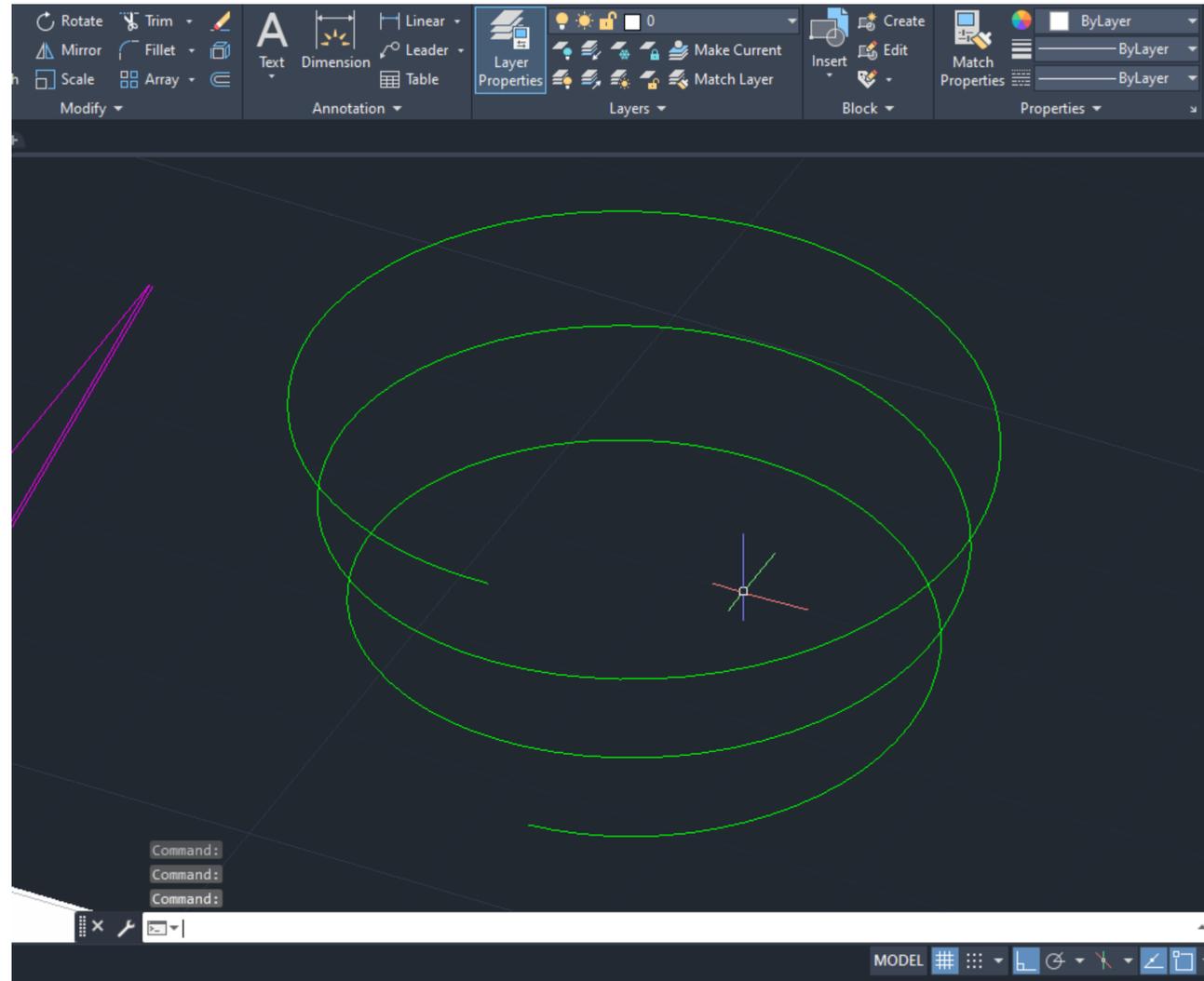
Corte Guggenheim



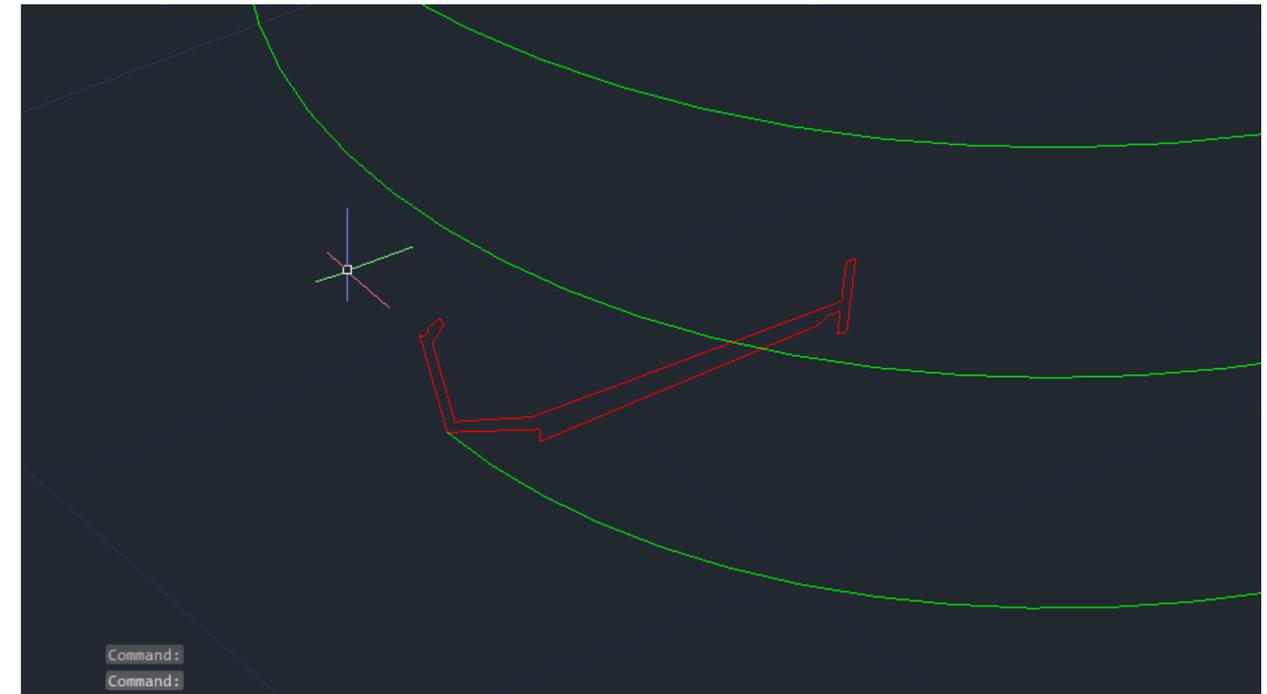
ReDig

Semana 10

Corte Guggenheim



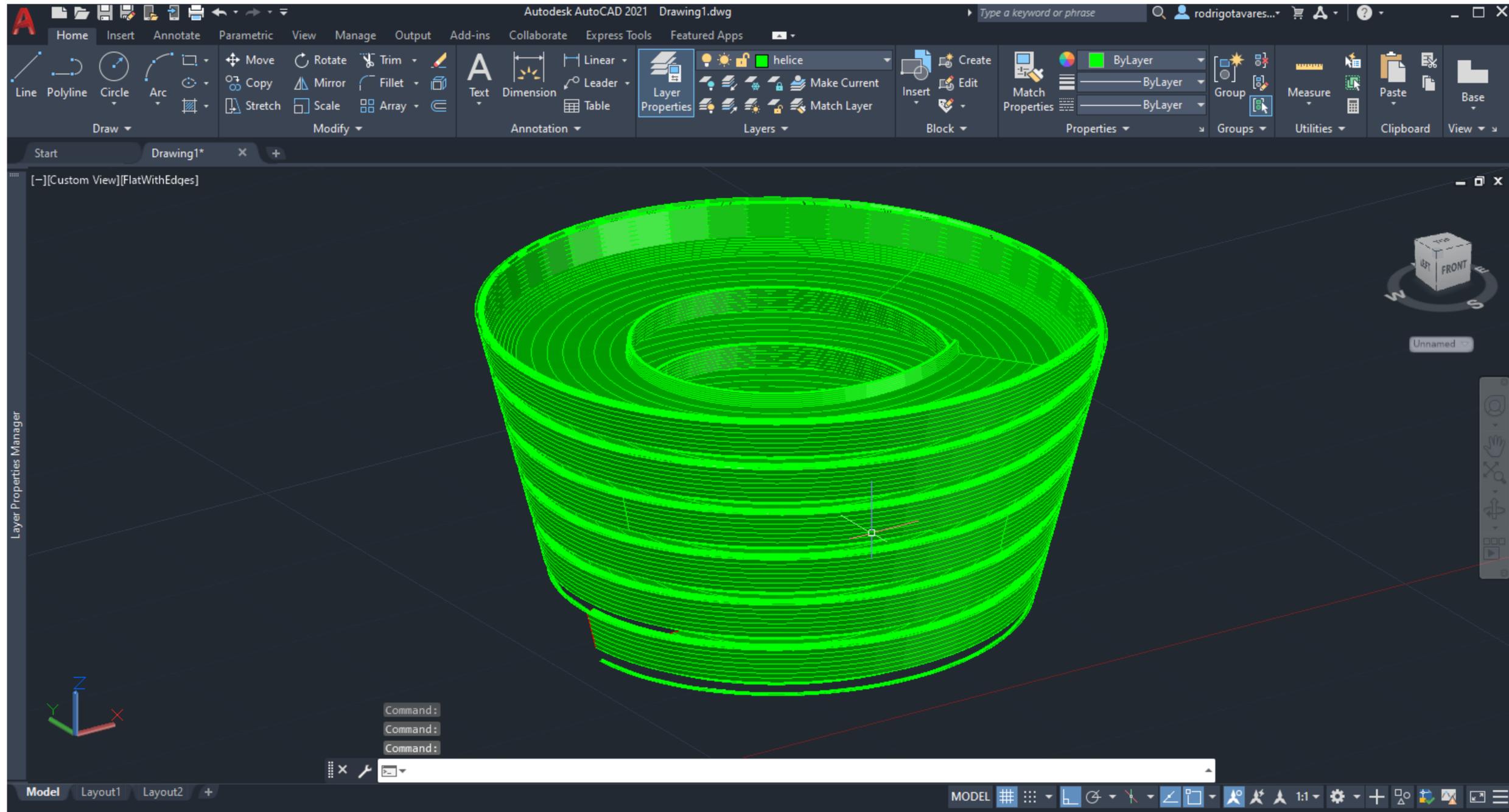
Comando: HELIX



ReDig

Semana 10

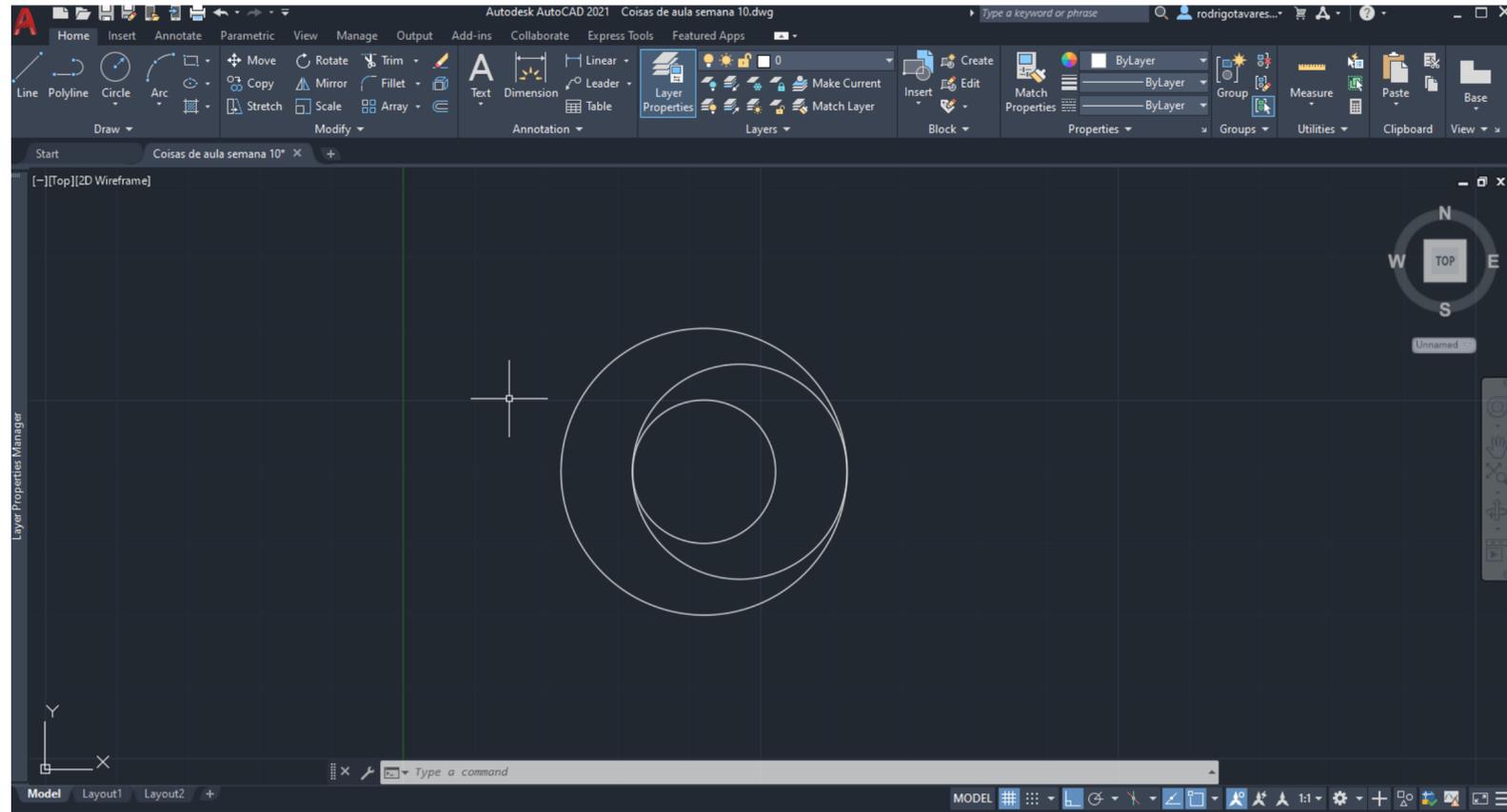
Corte Guggenheim



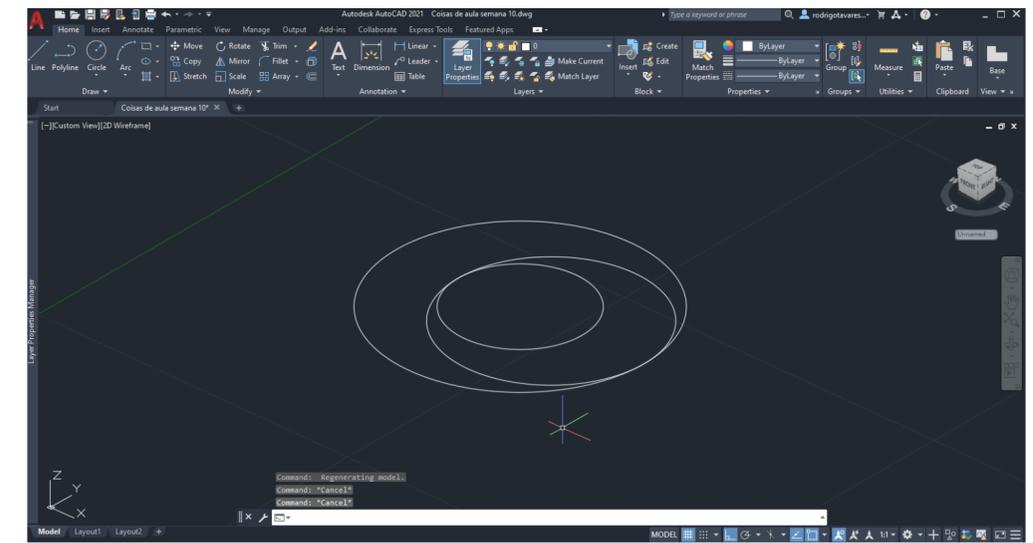
ReDig

Semana 10

Exercício de Aula



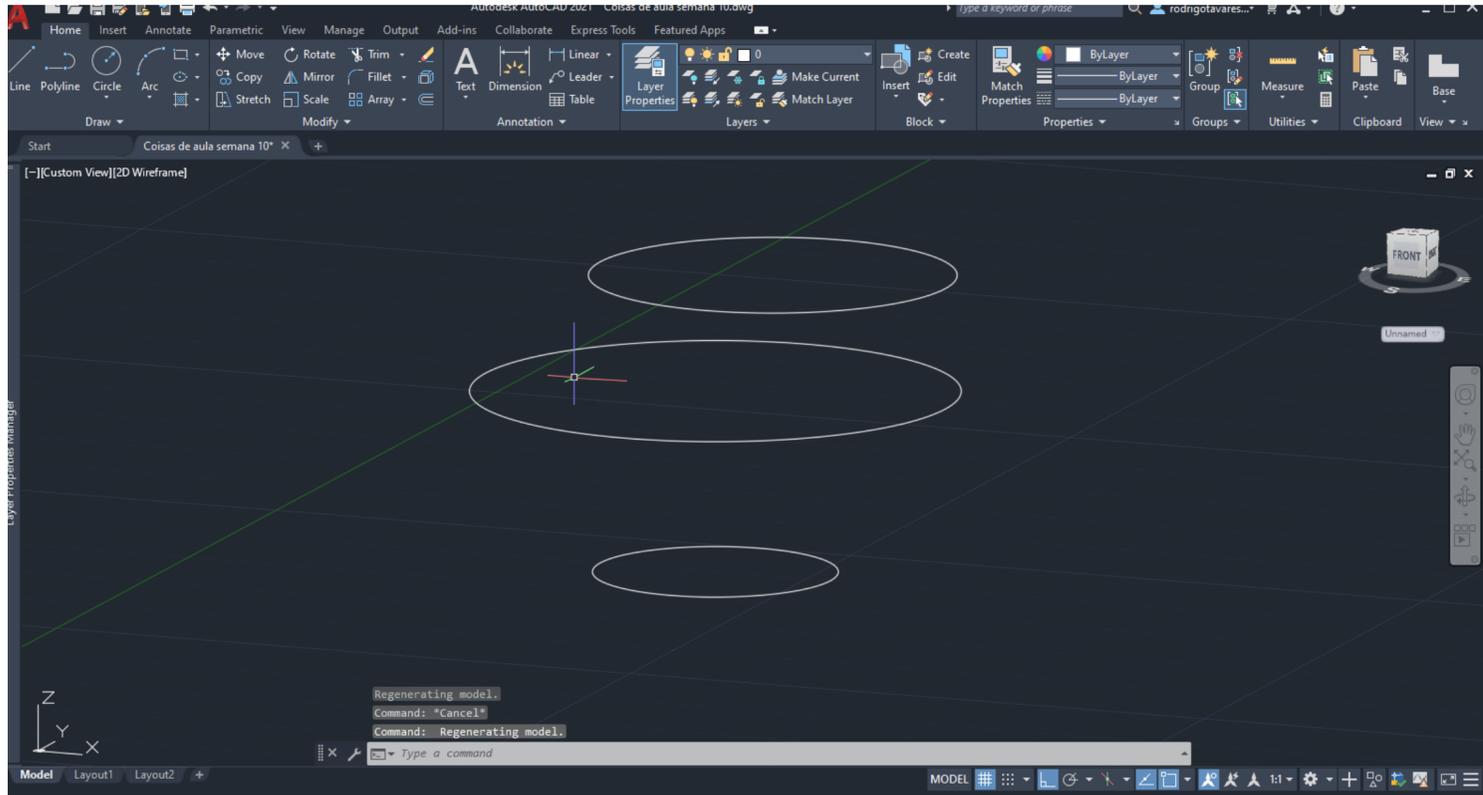
Construção de um modelo 3d através de 3 círculos



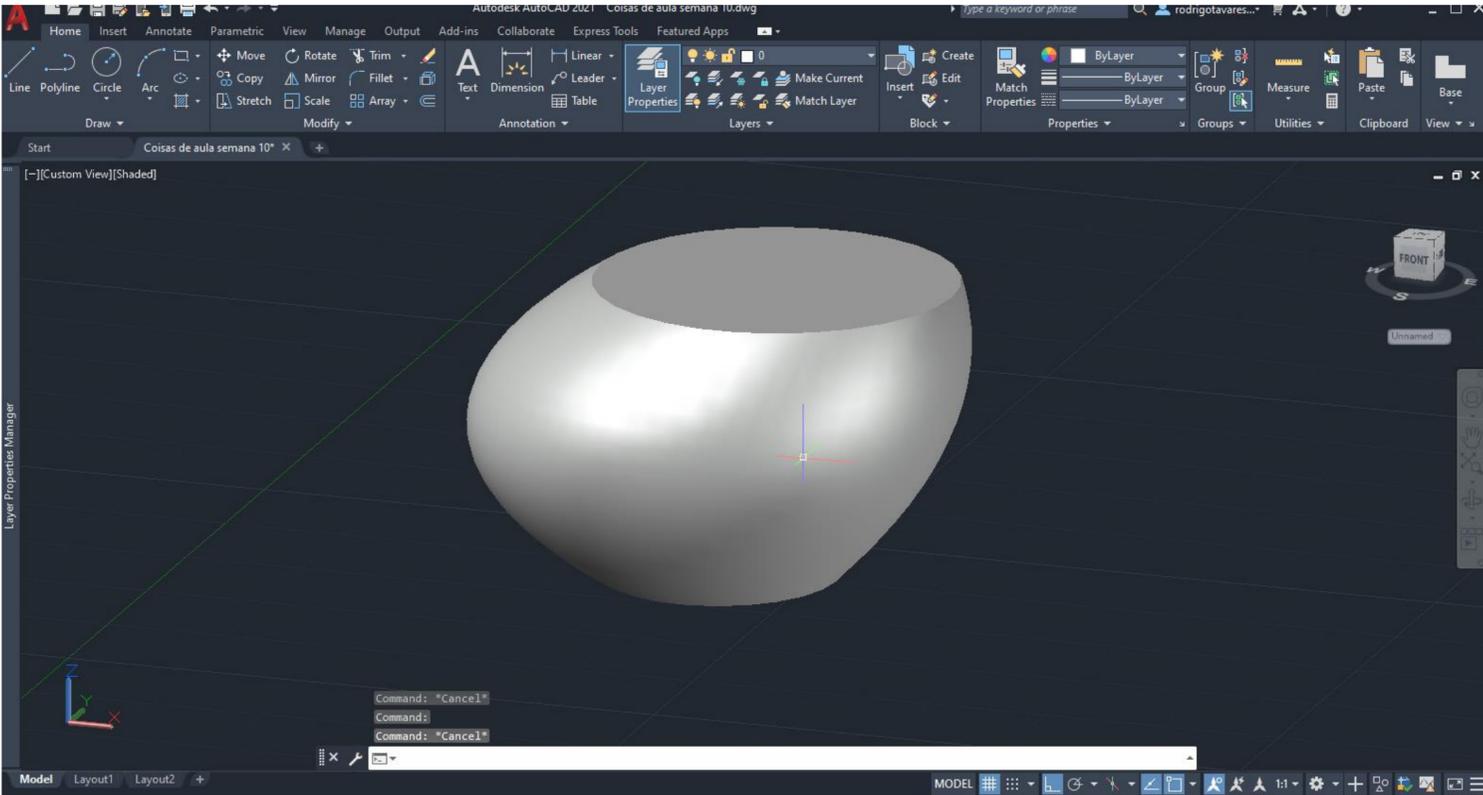
ReDig

Semana 10

Exercício de Aula

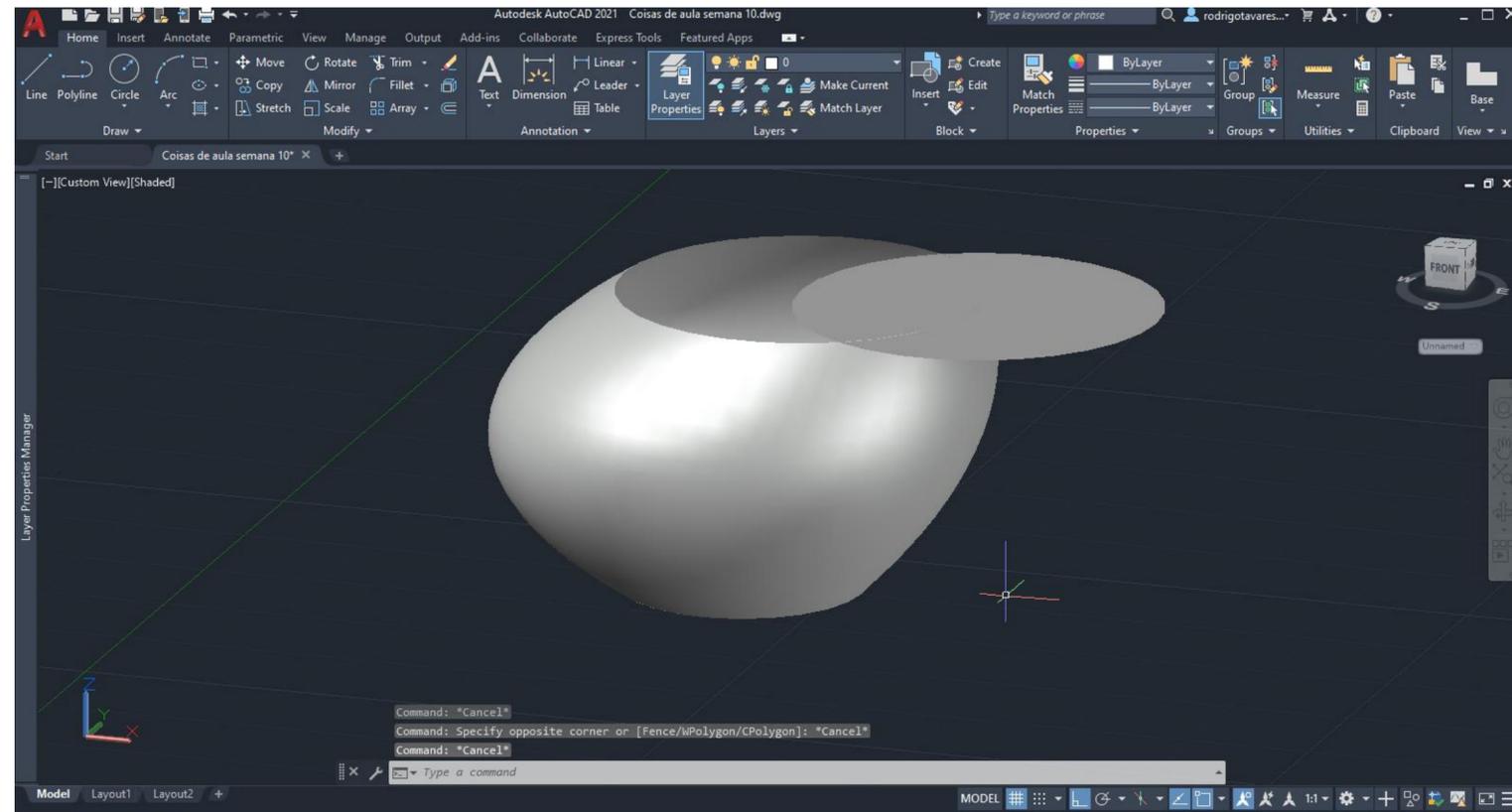


3DMOVE

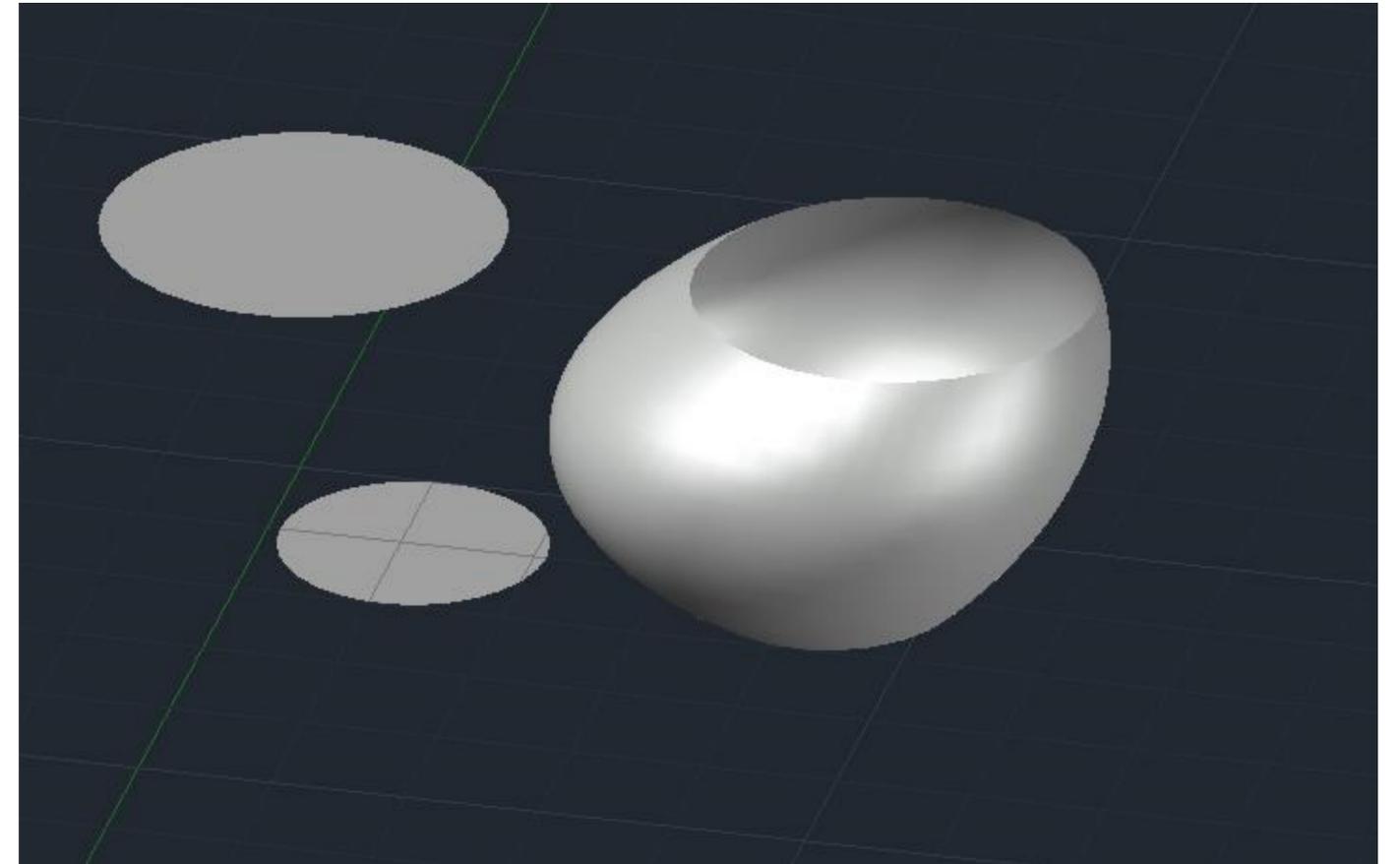


LOFT

Exercício de Aula



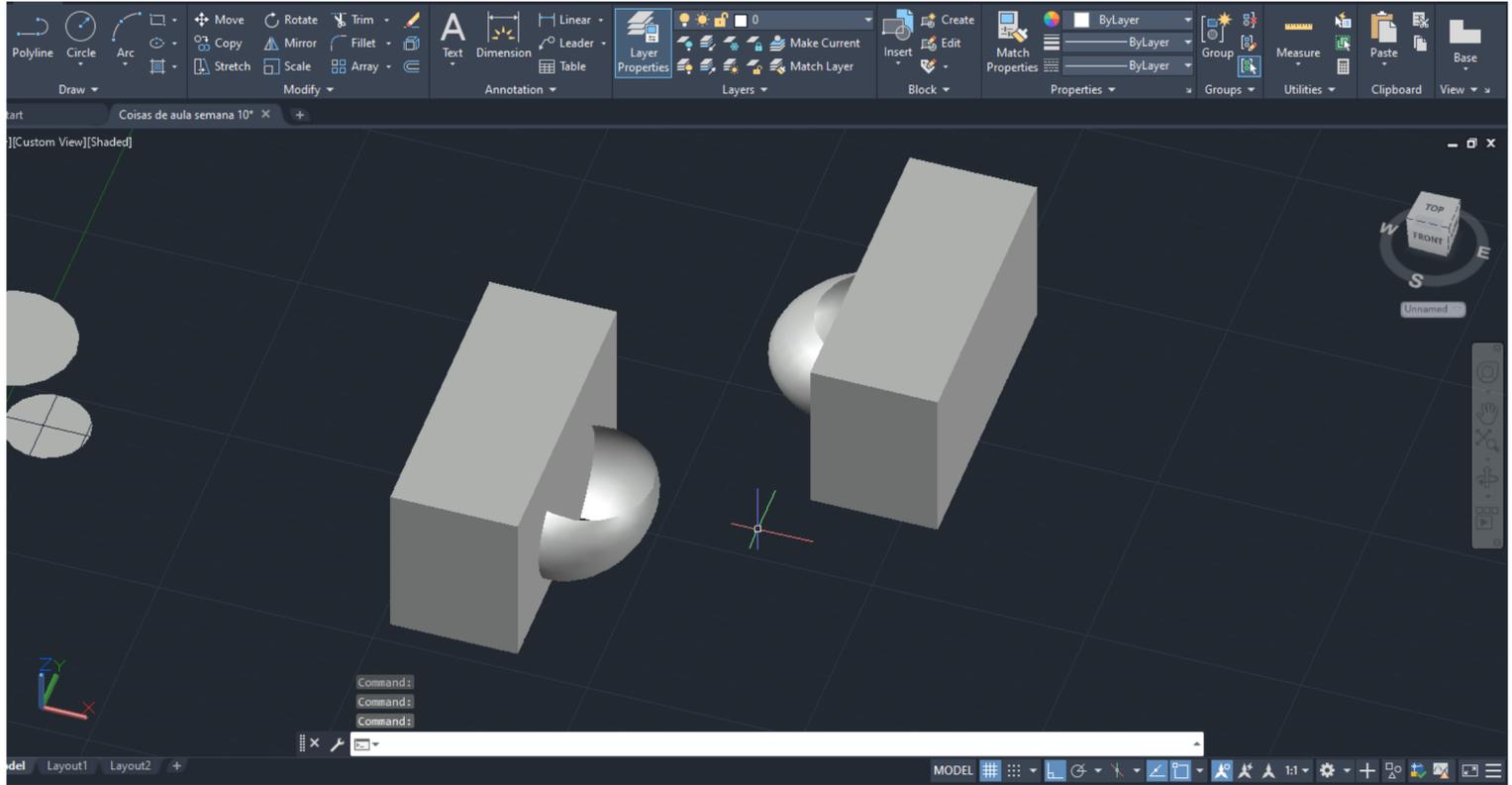
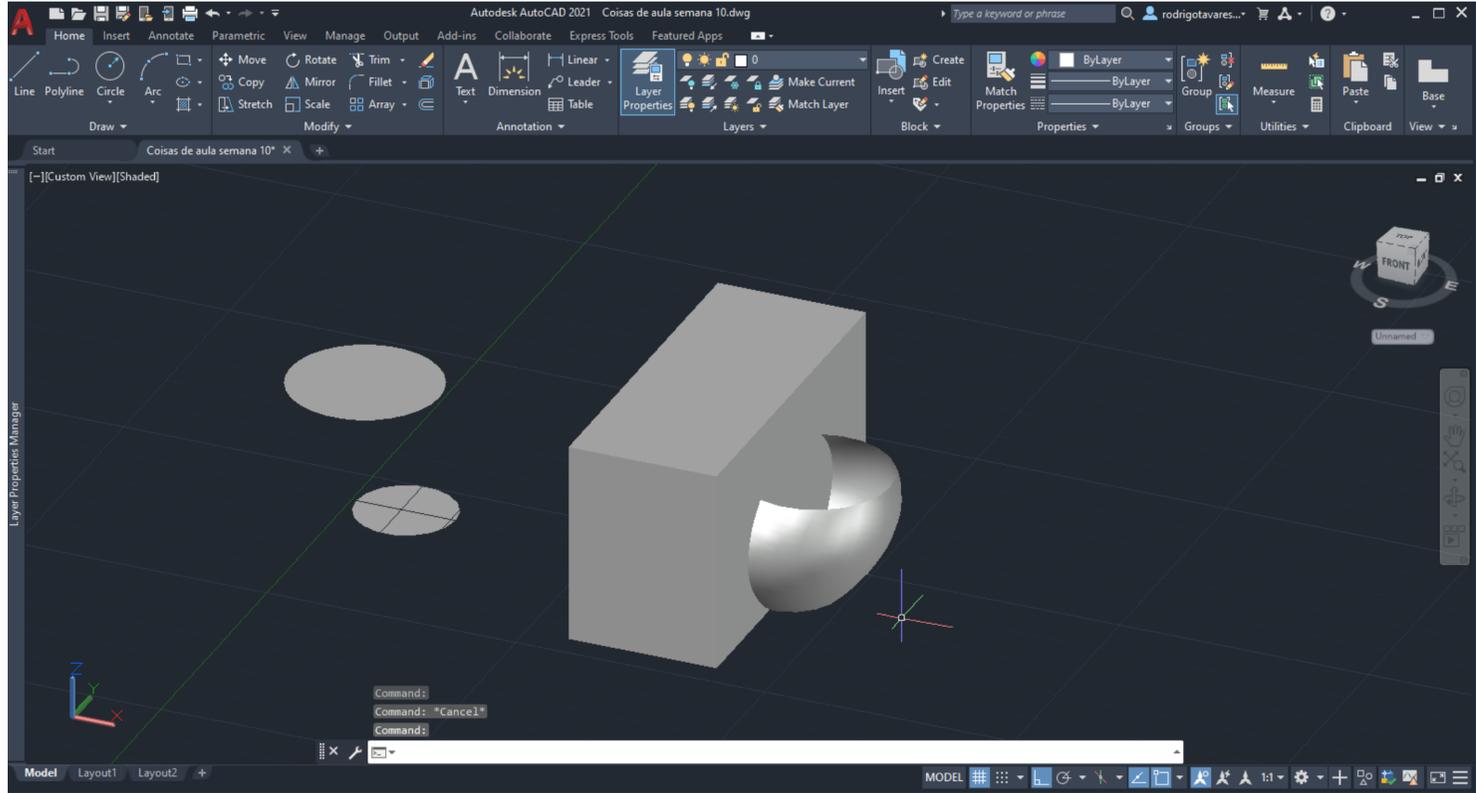
EXPLODE



ReDig

Semana 10

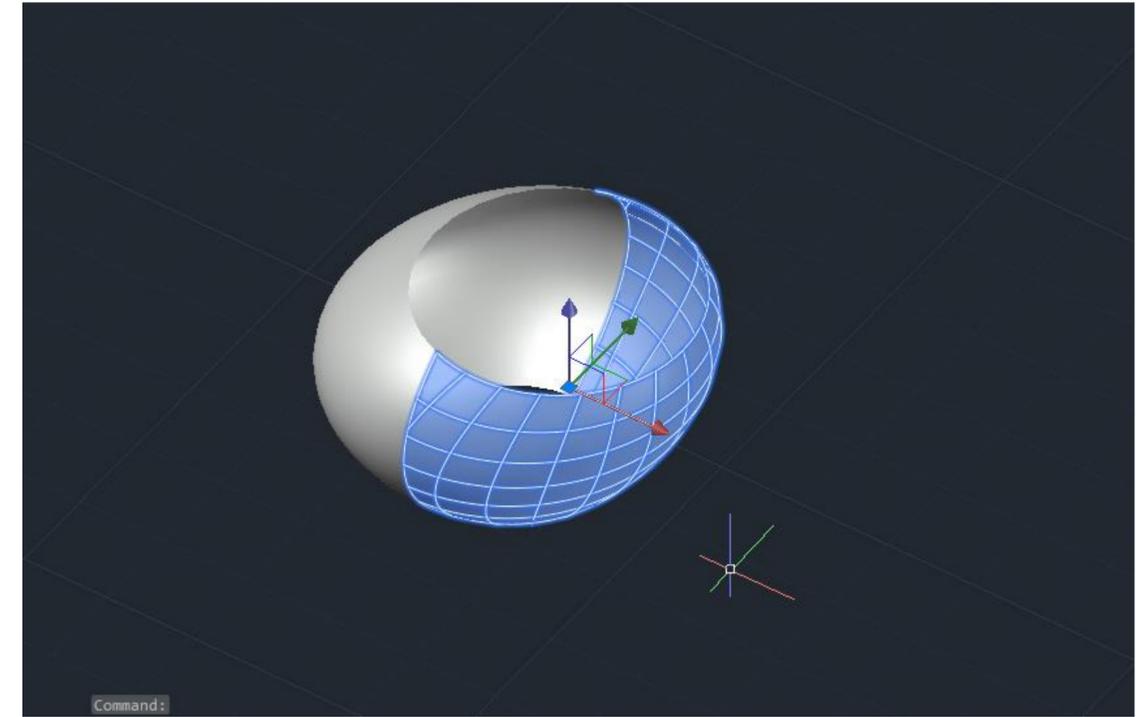
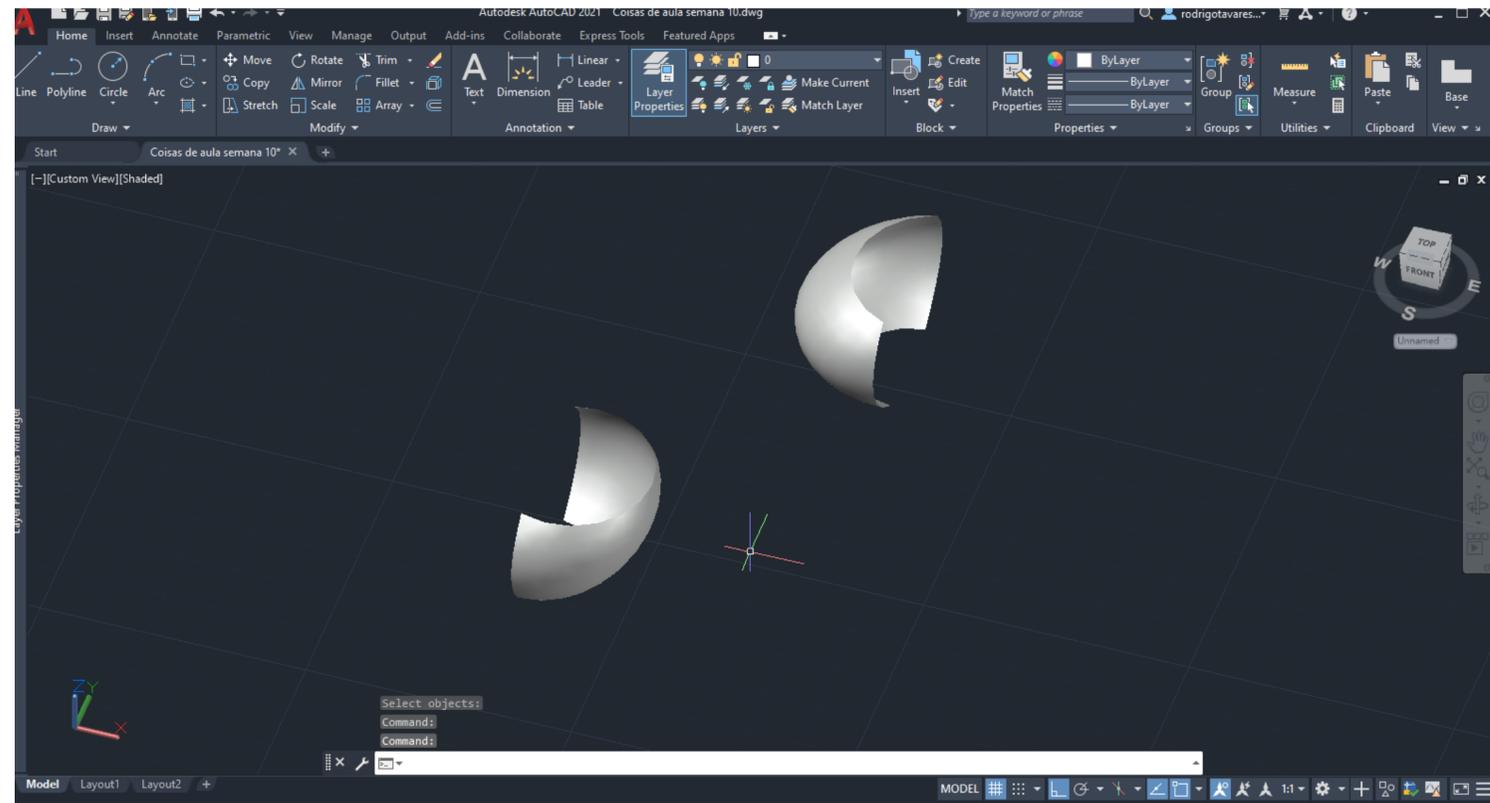
Exercício de Aula



ReDig

Semana 10

Exercício de Aula

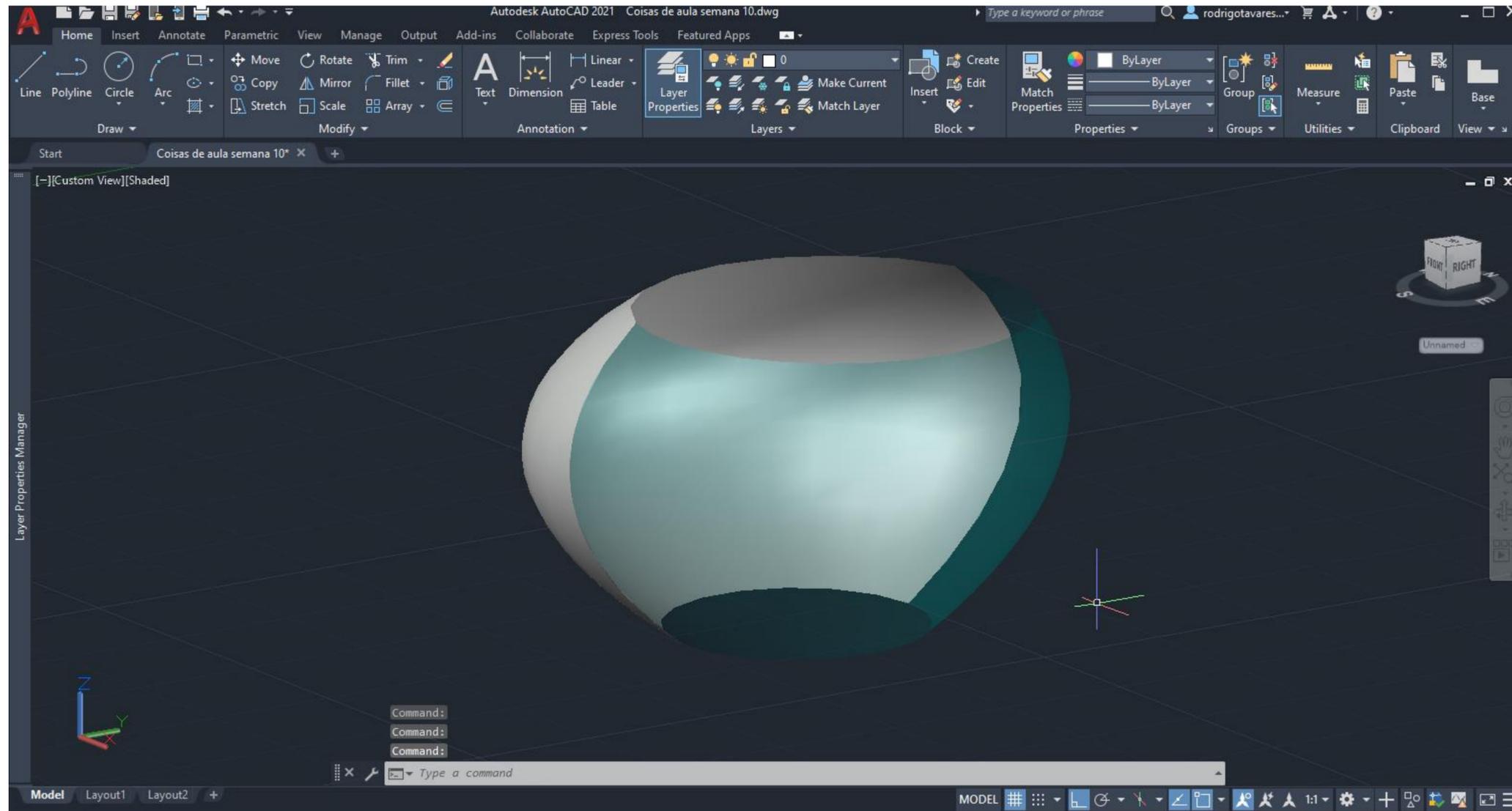


É realizado um SUBTRACT nas duas formas a que a soma das duas resulte na construção inicial

ReDig

Semana 10

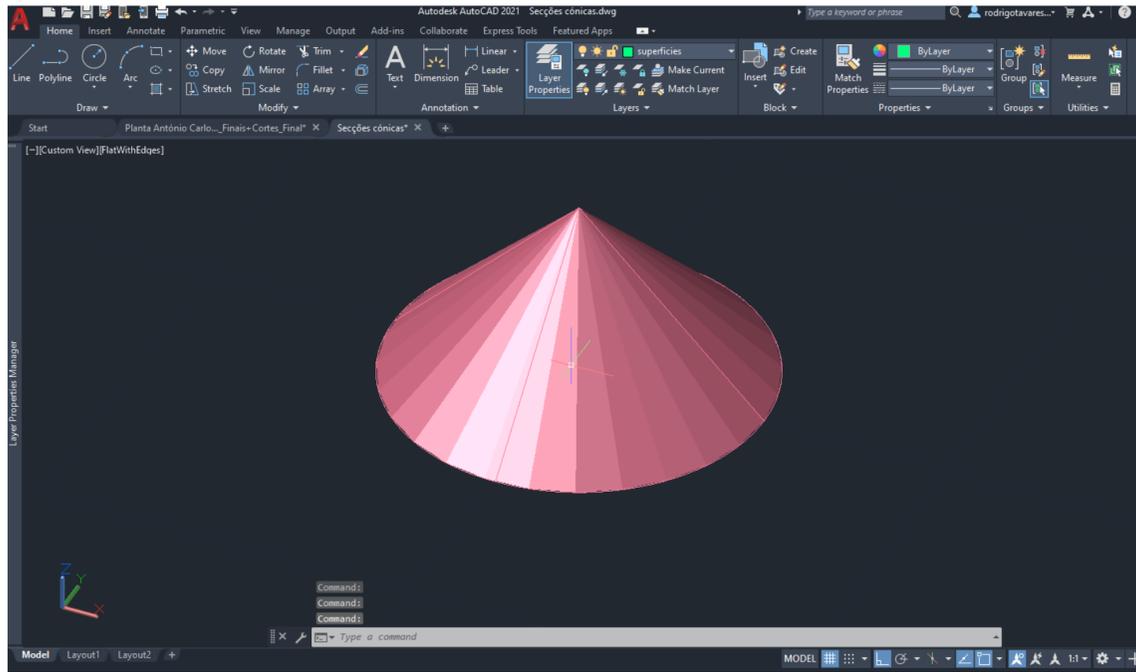
Exercício de Aula



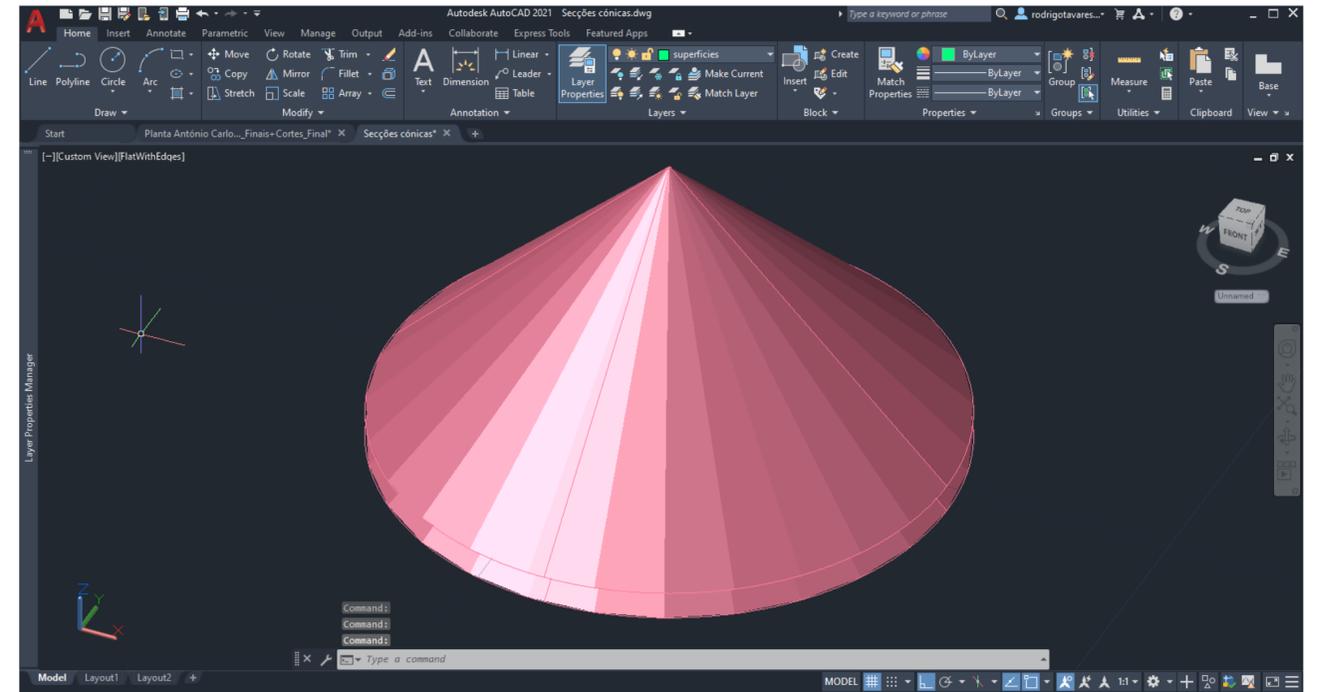
Depois escolher uma das partes para que se torne numa fachada envidraçada

Através de transparência cria este efeito de vidro

Secções Cónicas

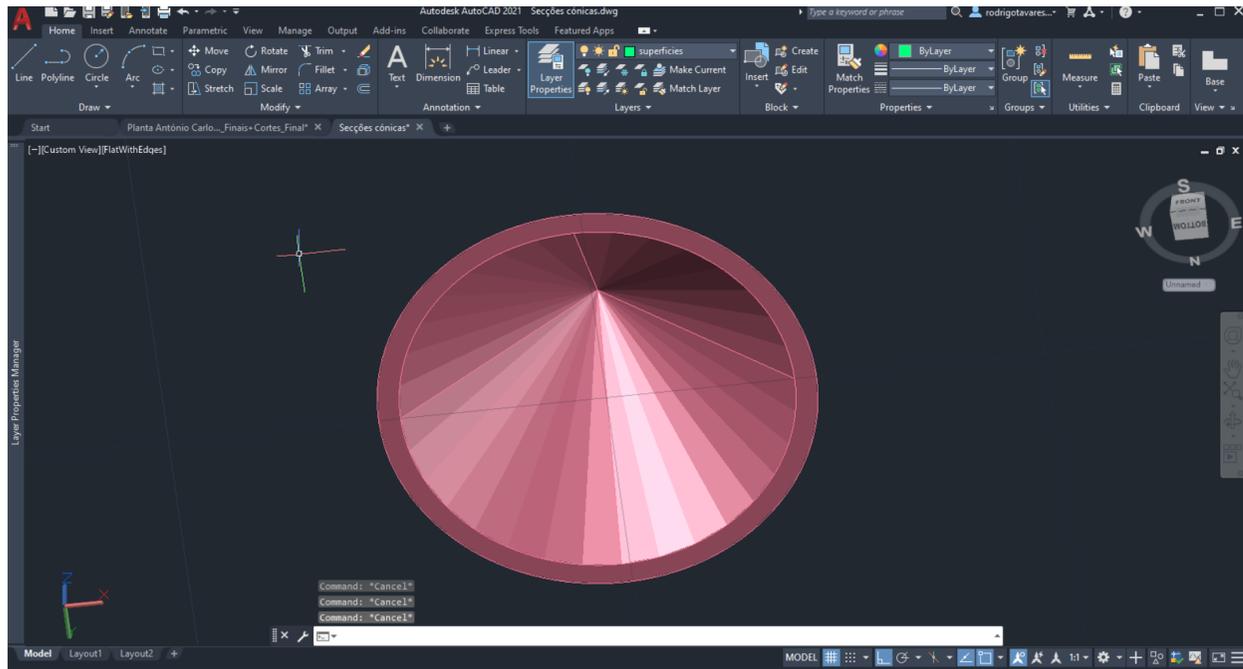


Criação de um cone através do comando CONE com 5 unidades de raio e de altura.

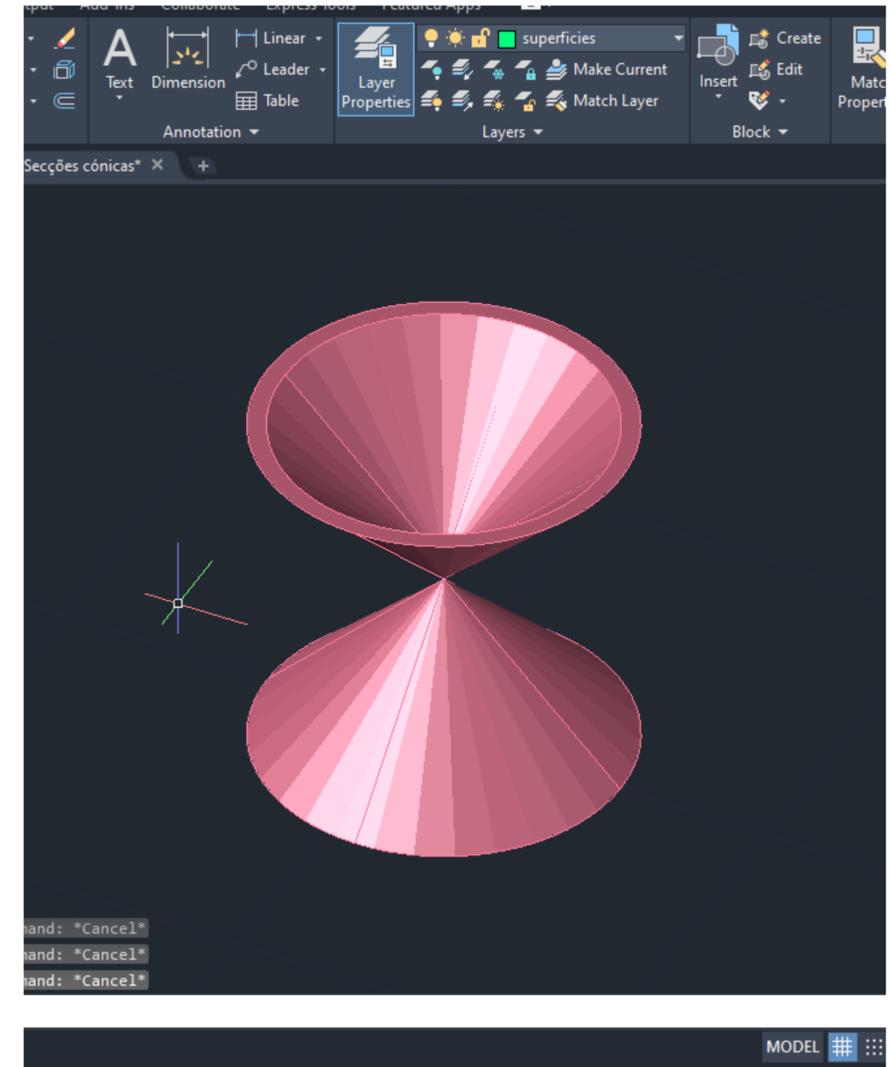


Com o cone criado agora vamos realizar uma subtracção entre dois cones iguais

Secções Cónicas



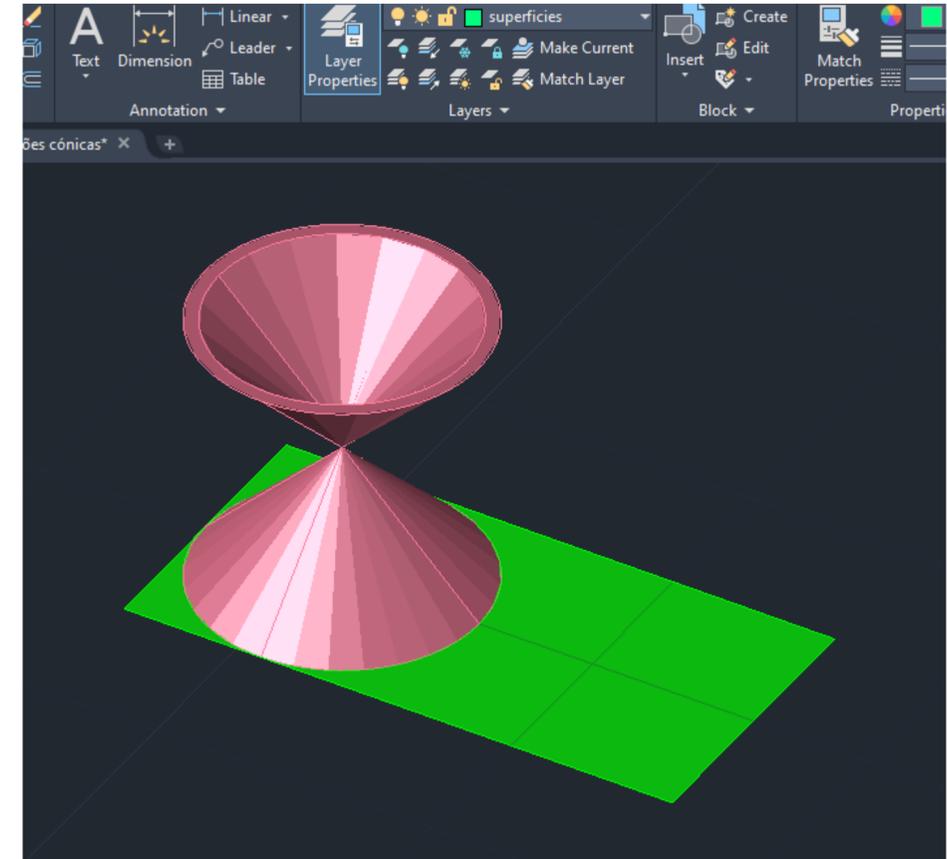
Com a subtracção feita, faz-se um 3DMIRROR no cone de forma a obtermos esta forma



Secções Cónicas

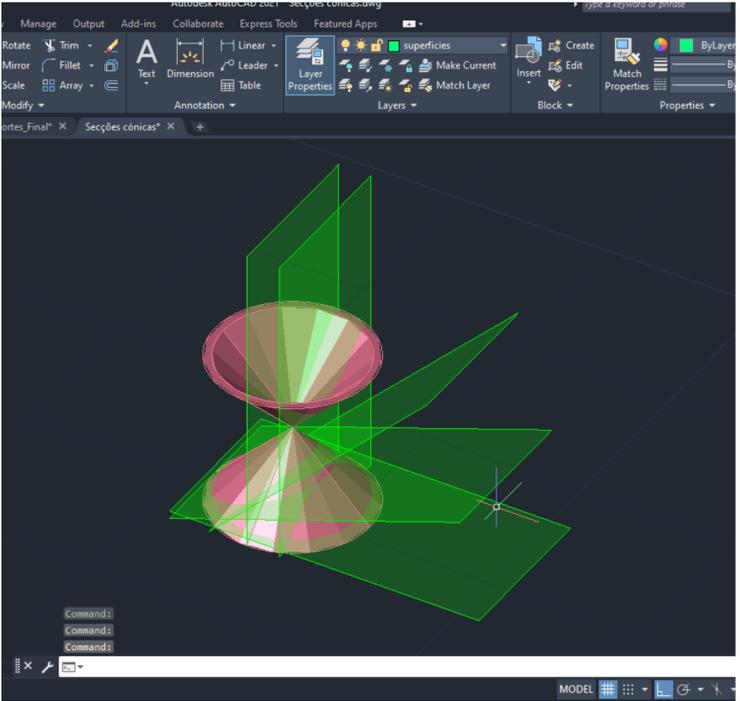
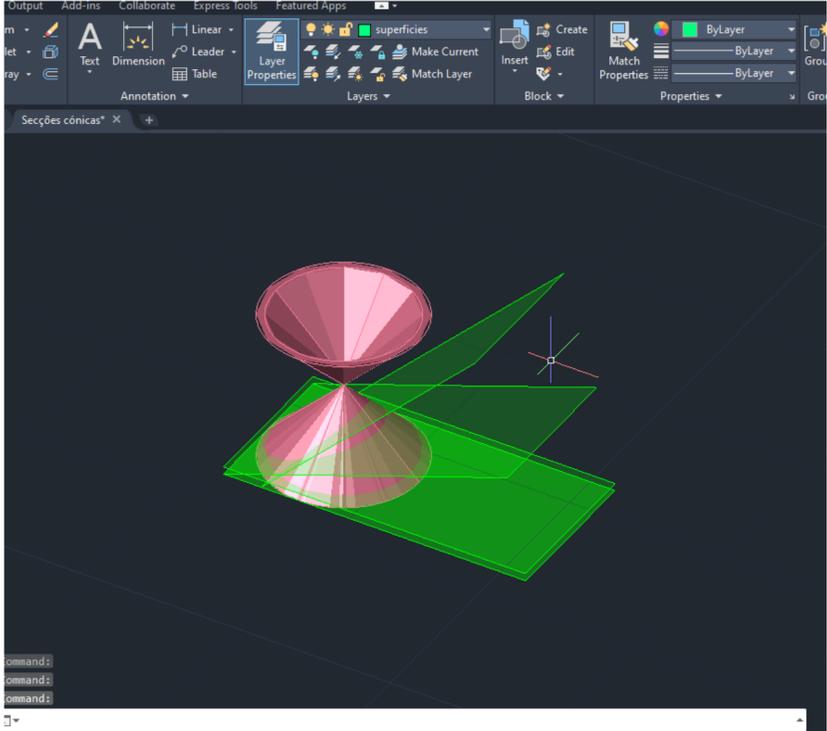
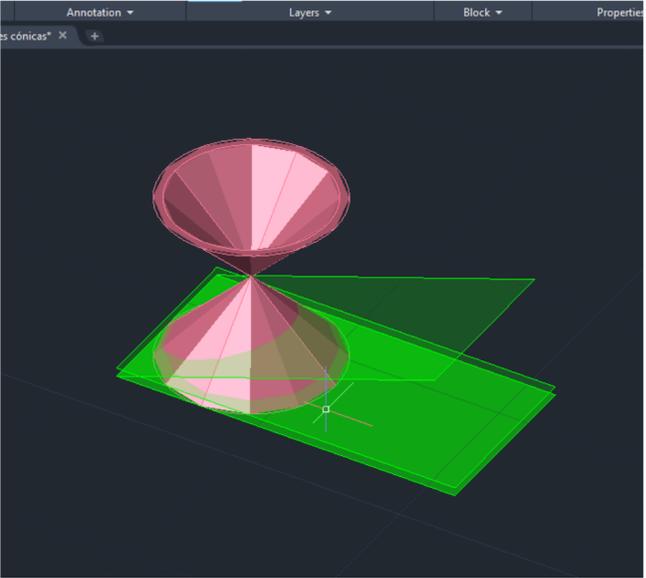
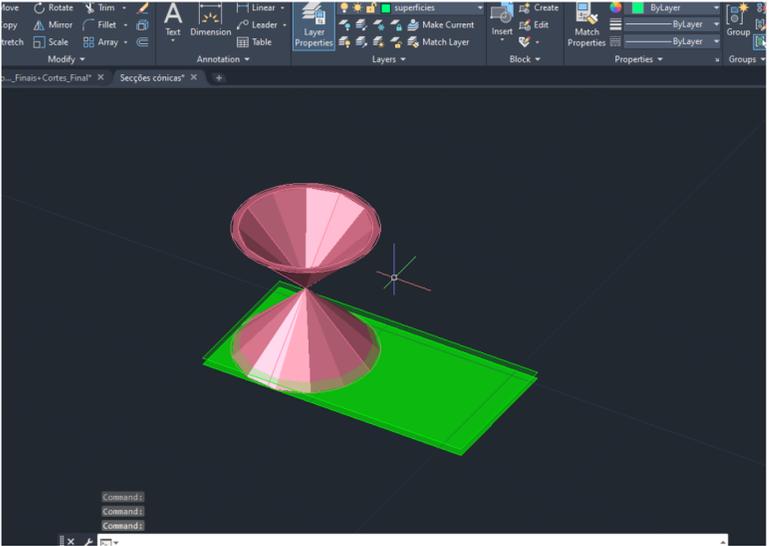


Criação de um retângulo de 20 x 10



Realizar cinco cópias do retângulo

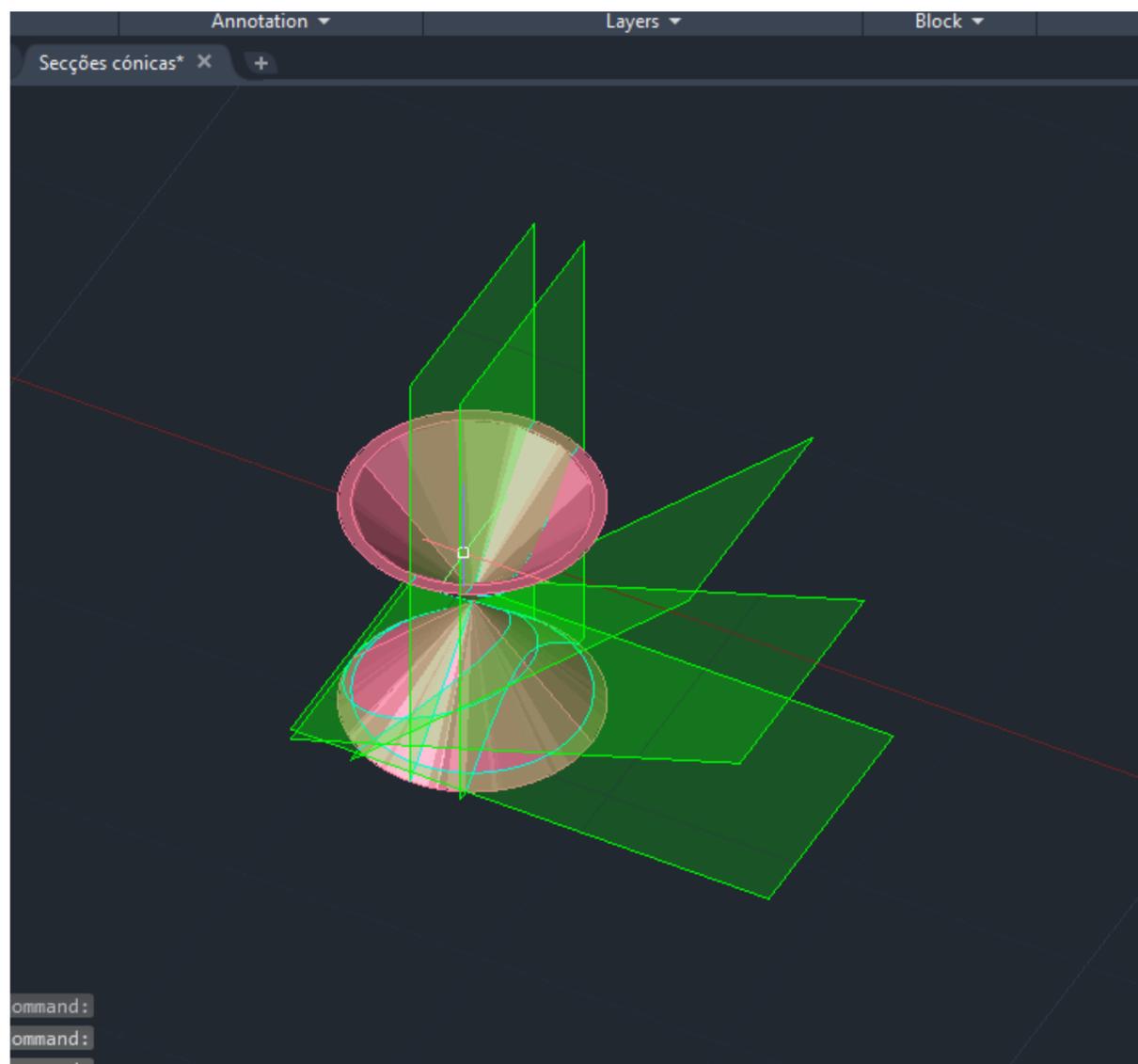
Secções Cónicas



ReDig

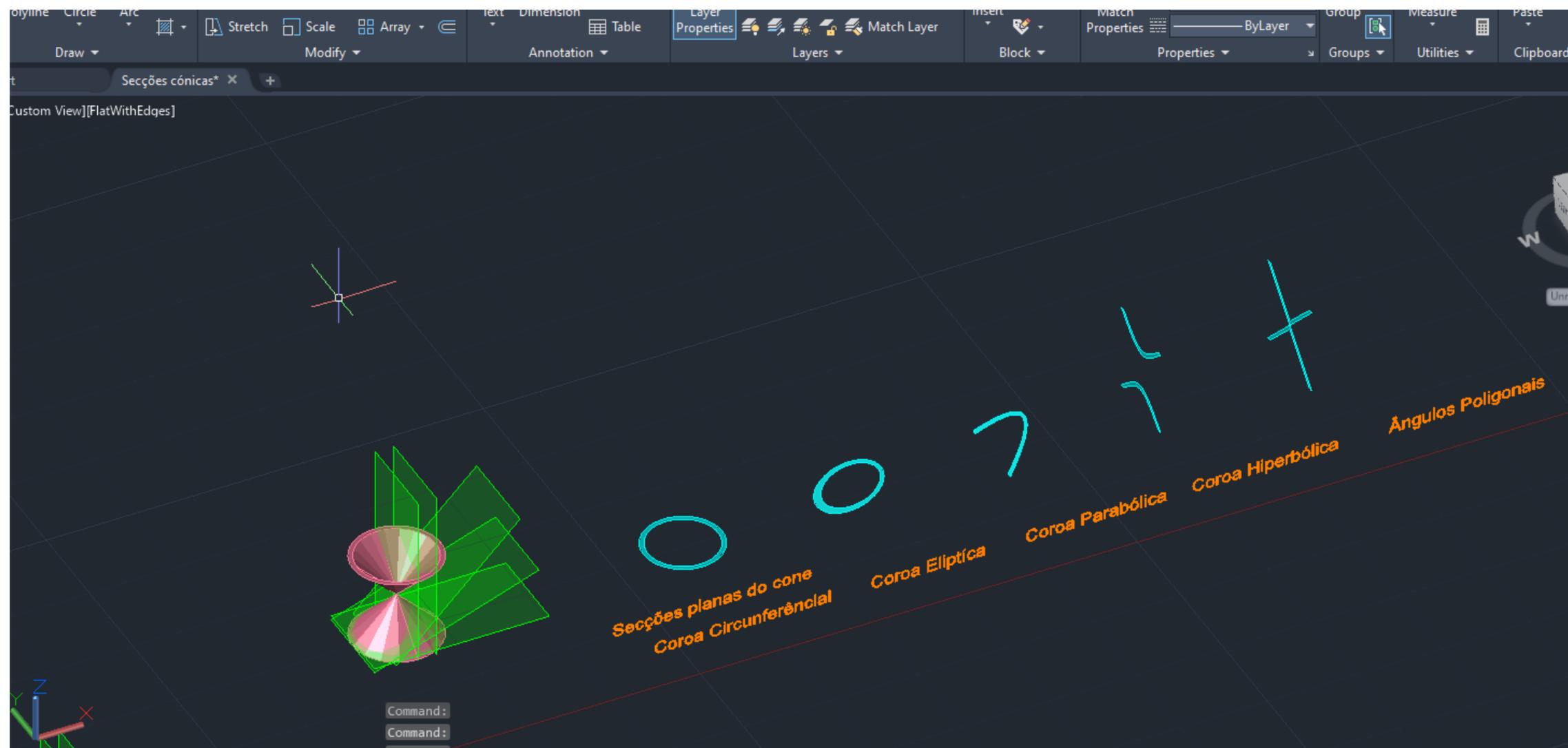
Semana 10

Secções Cónicas



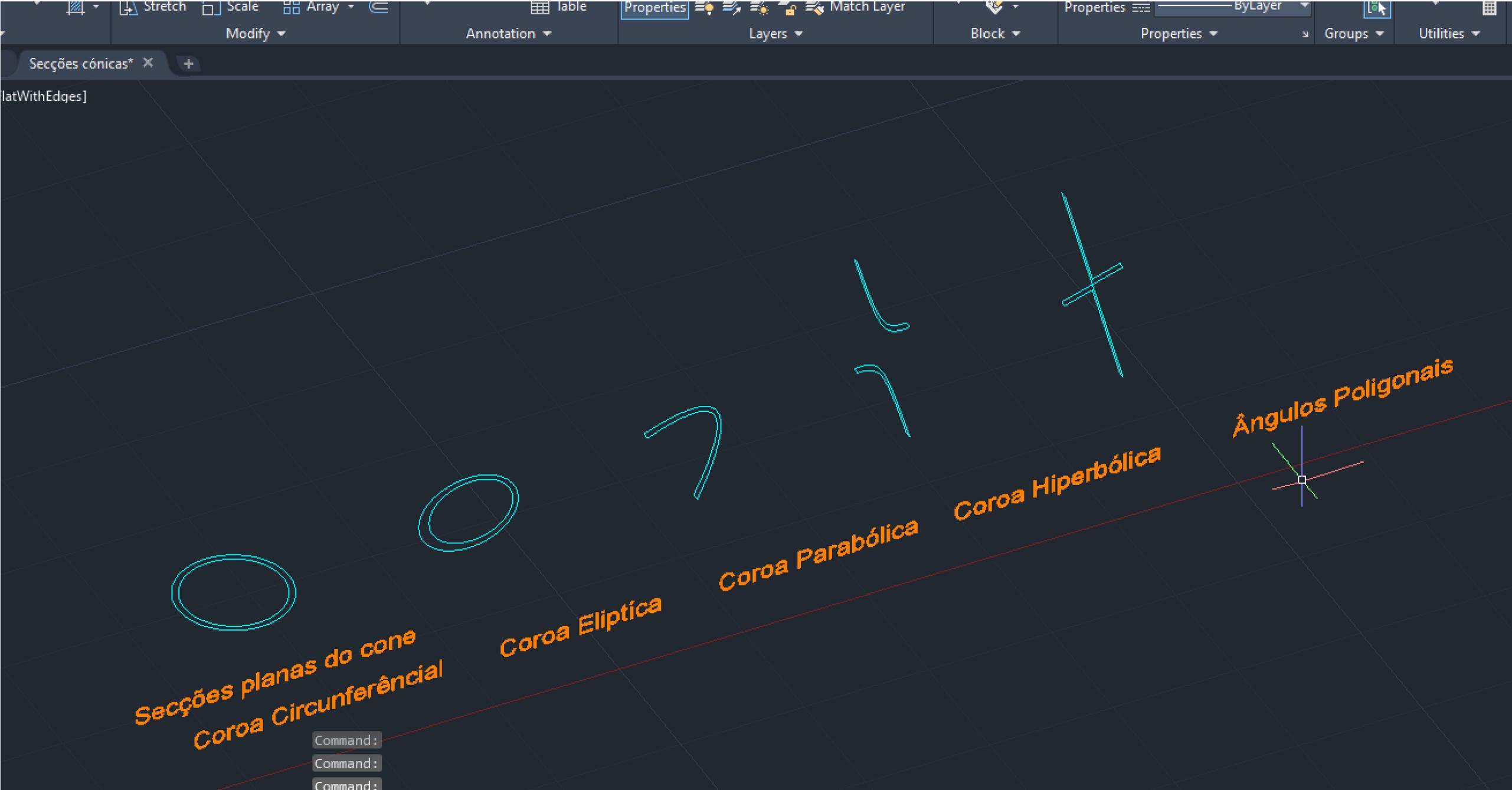
Marcação das Secções através do comando
Section

Secções Cónicas

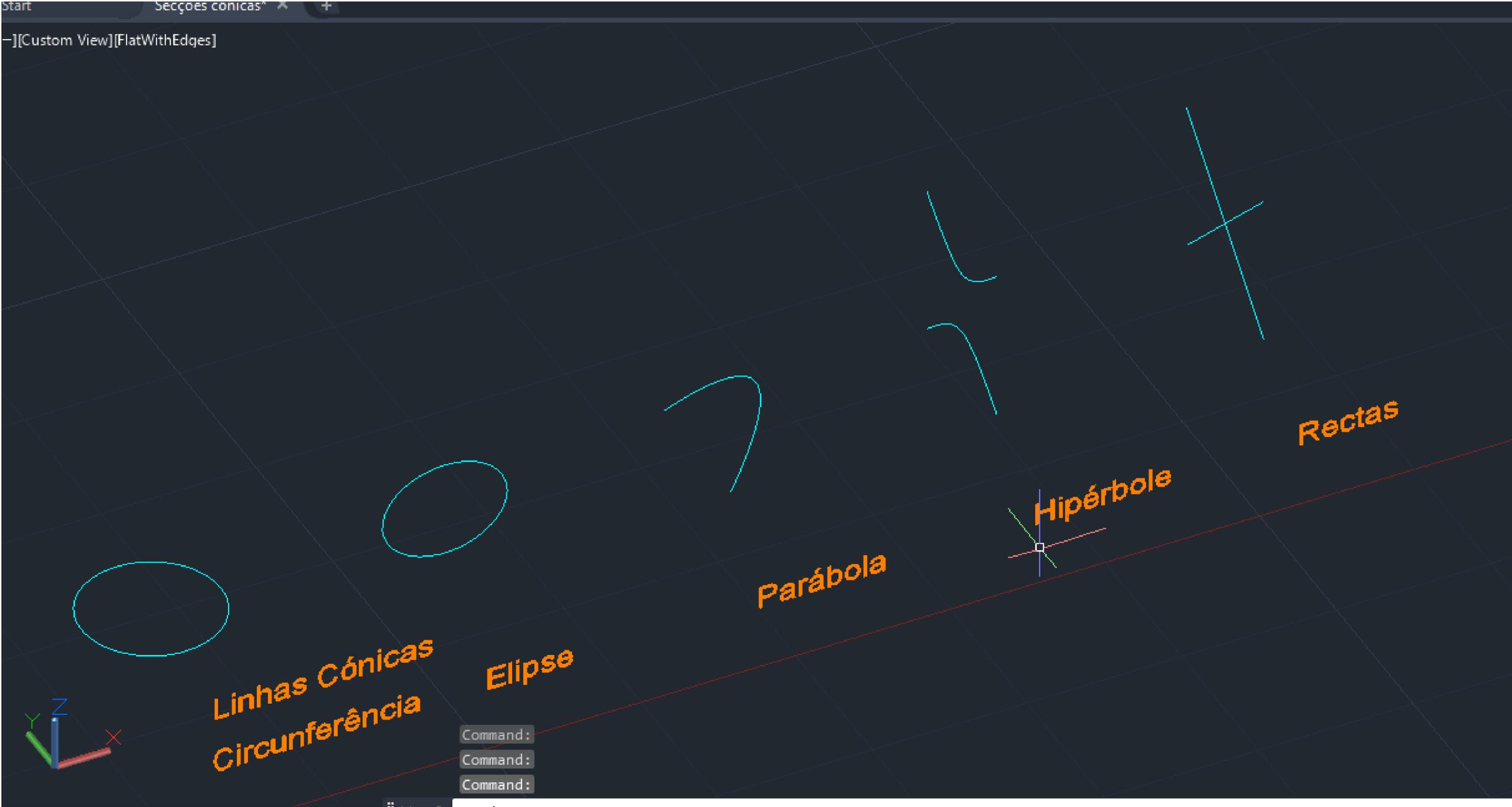


Depois de todas as secções feitas separamo-las da figura para obter uma visão das mesmas

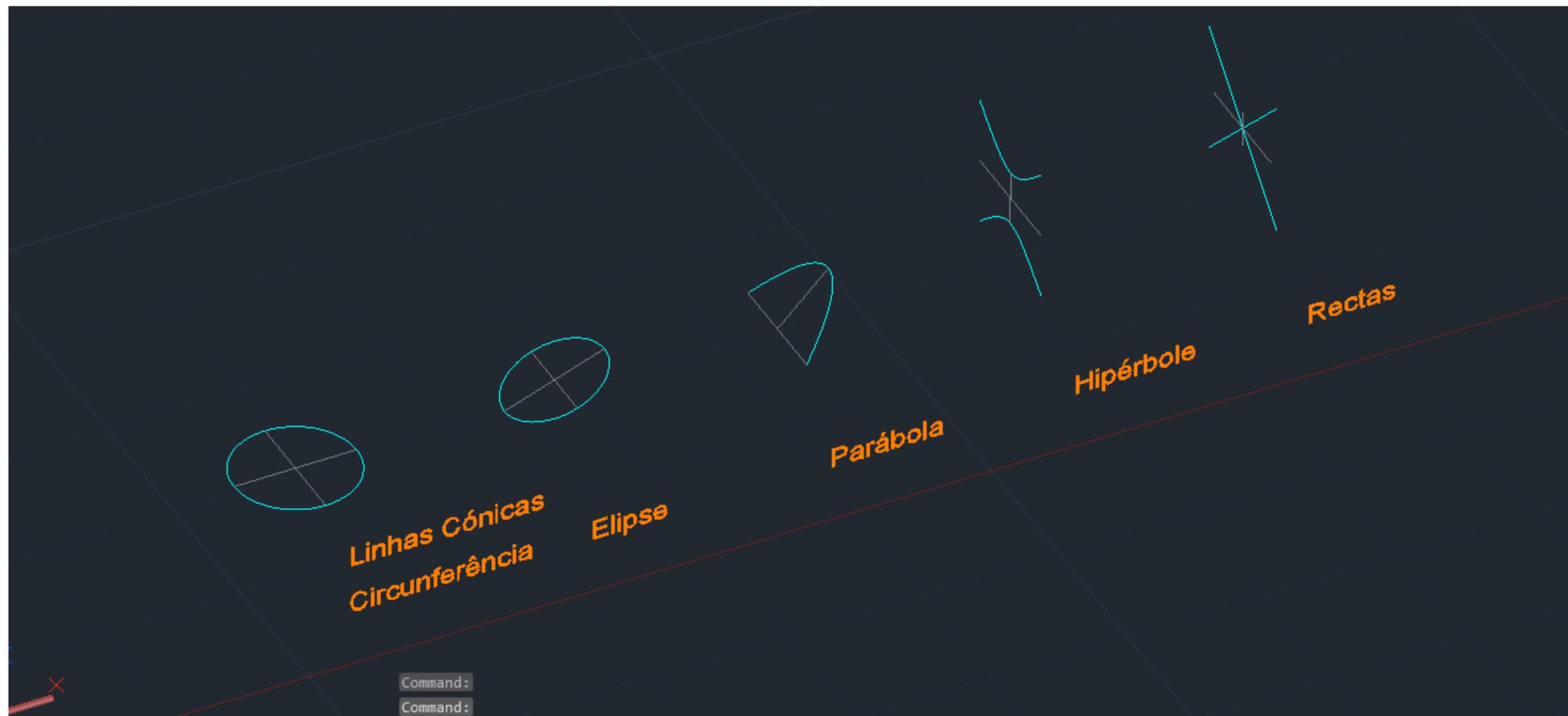
Secções Cónicas



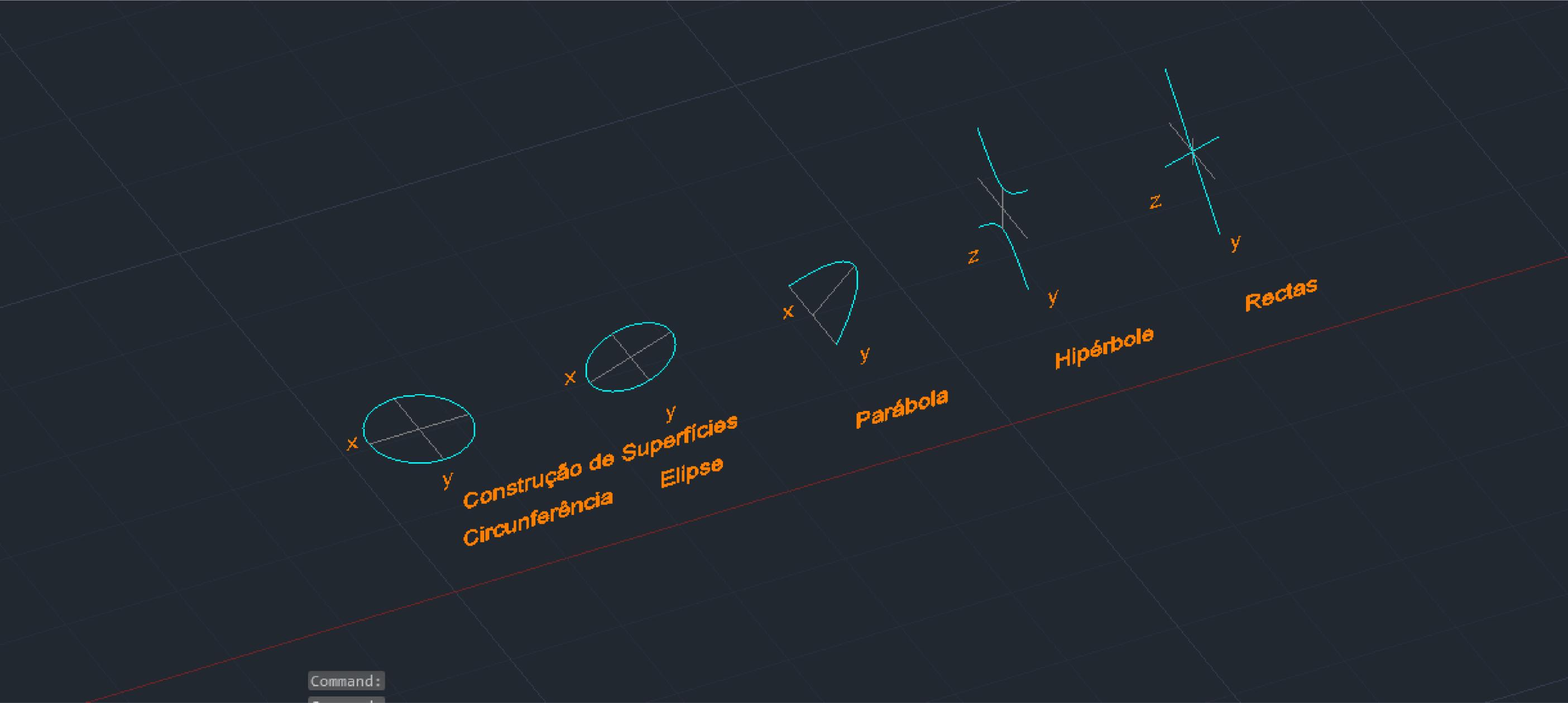
Secções Cónicas



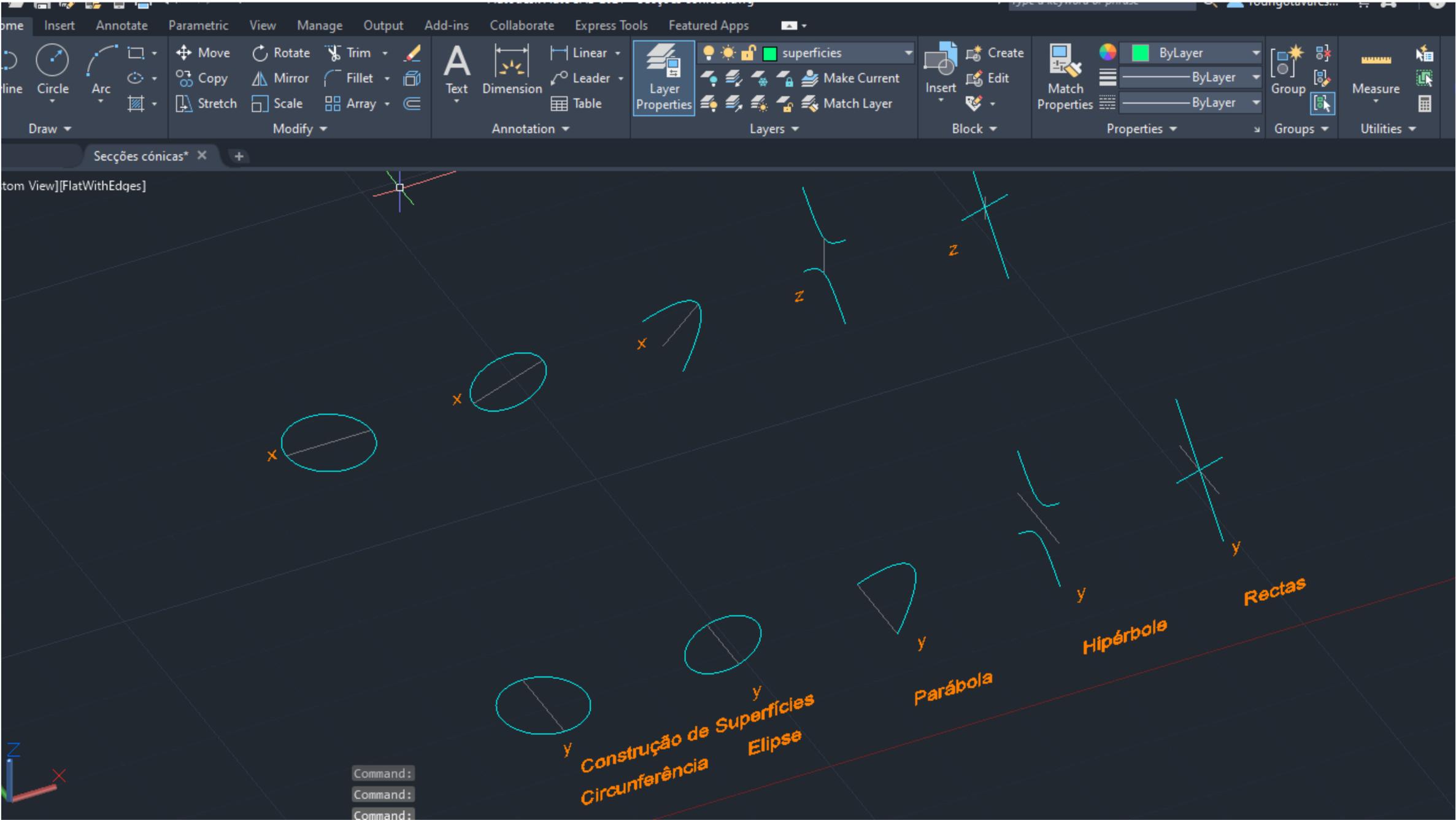
Secções Cónicas



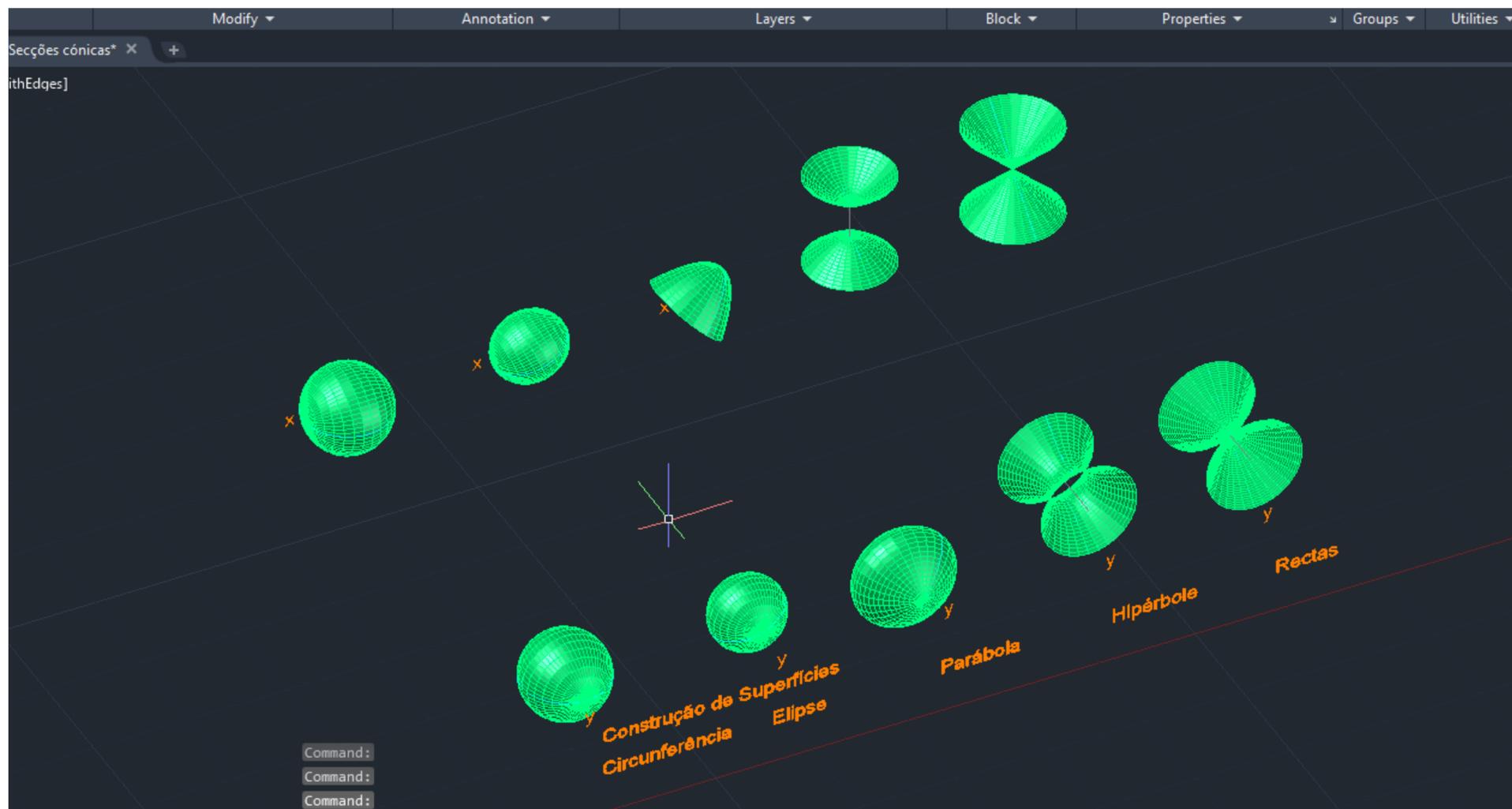
Atribuimos eixos às linhas cónicas



Secções Cónicas



Secções Cónicas



Através do REVSURF obtemos estas construções