

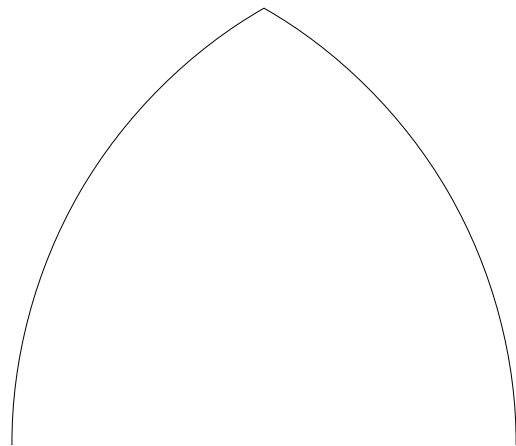
TRABALHO II

ABÓBADAS

LEILA BLUE - 20241201

Miarq2H - Modelação Geométrica e Generativa - Prof. Nuno Alão - Faculdade de Arquitetura Universidade de Lisboa

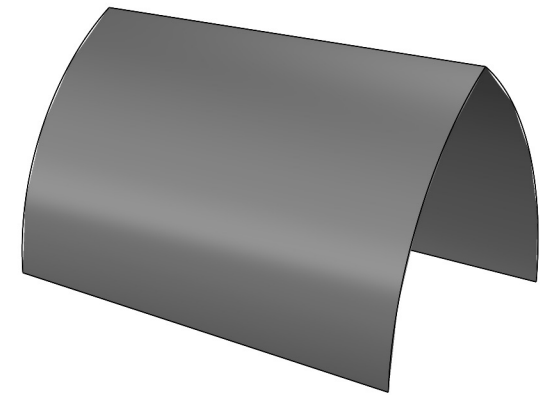
8660



FRONT VIEW

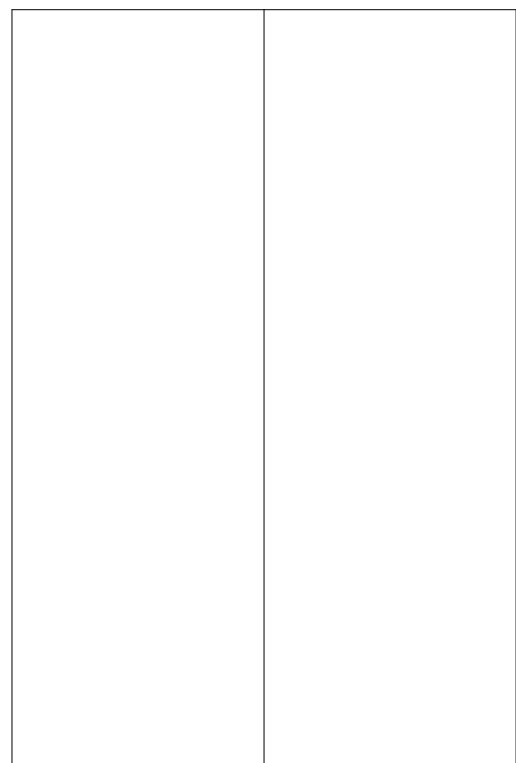


SIDE VIEW



PERSPECTIVE VIEW

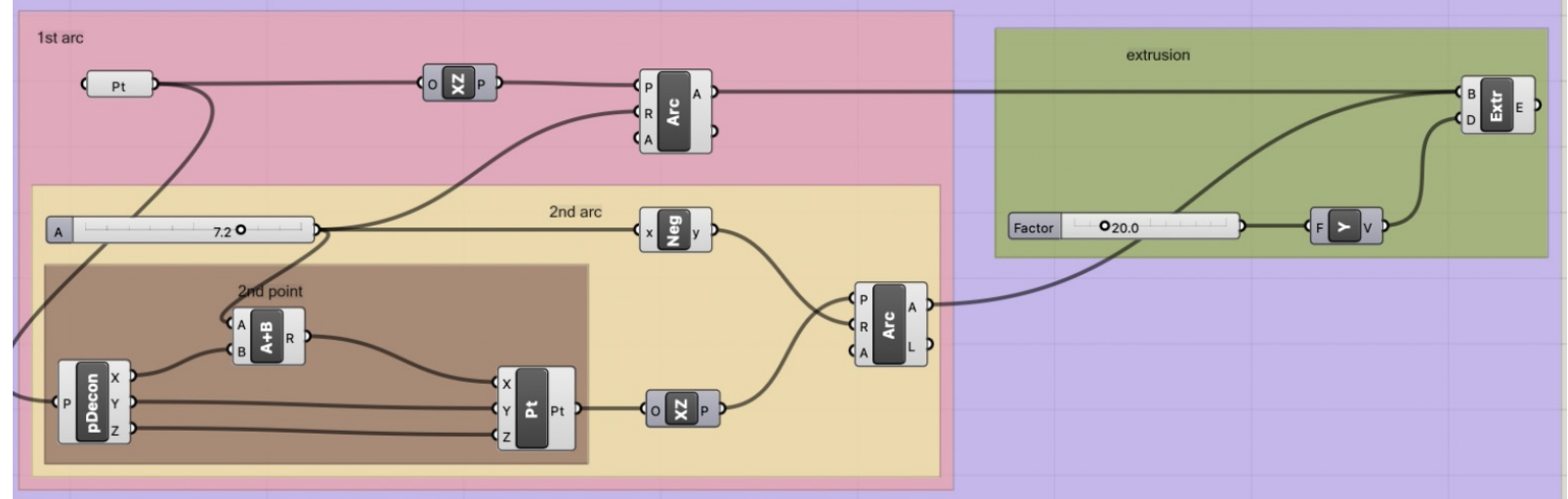
15000



TOP VIEW

10000

ABÓBADA DE OGIVA



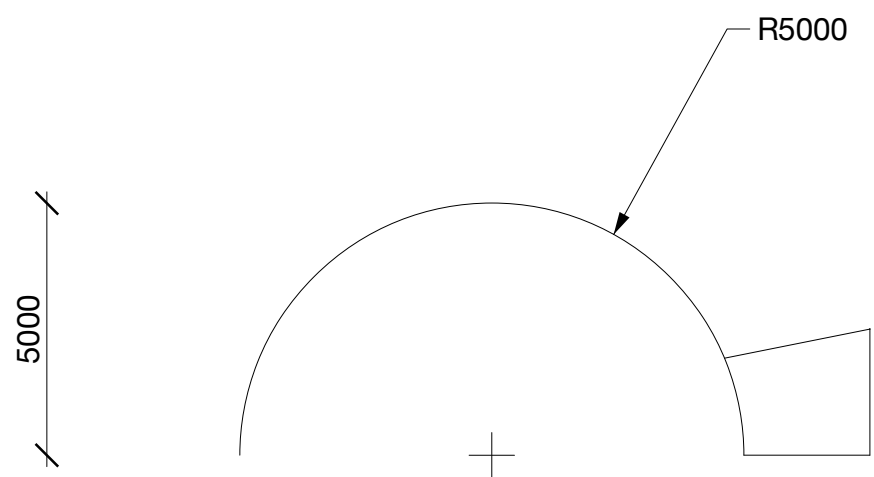
CONSTRUÇÃO EM GRASSHOPPER

ABÓBADA DE OGIVA

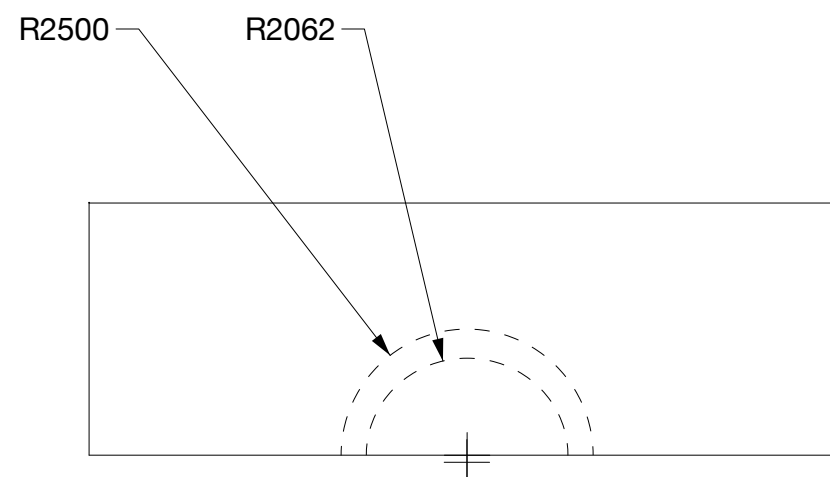
1 / 150

LEILA BLUE - 20241201 - 2Hmiarq

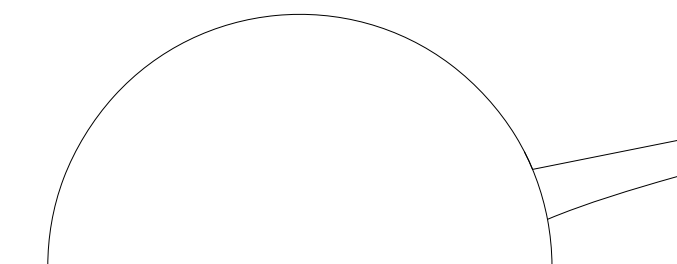
Modelação Geométrica e Generativa
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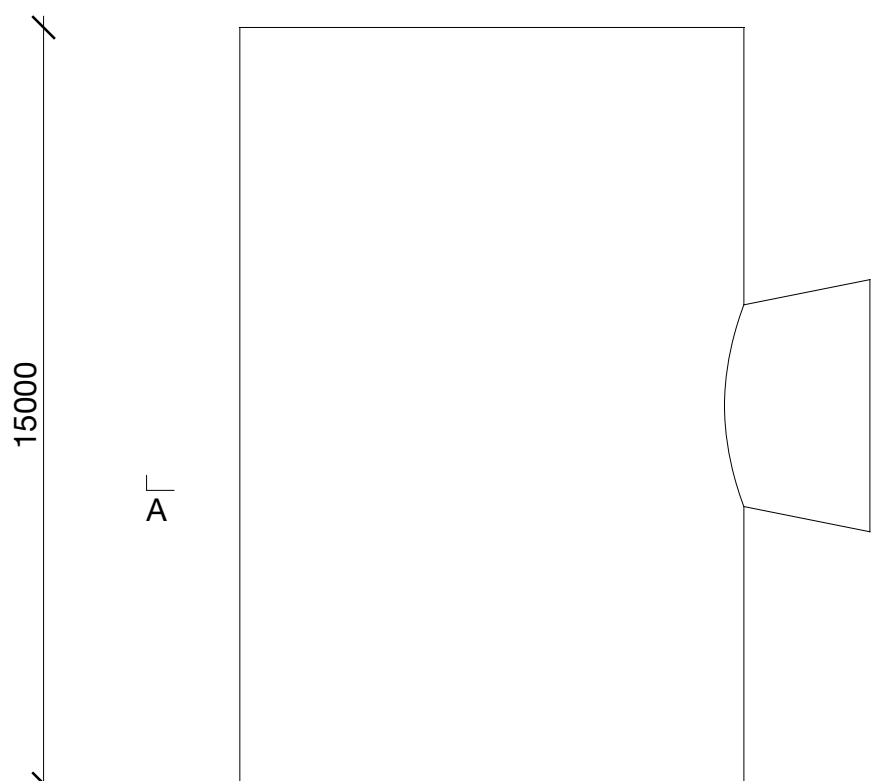
FRONT VIEW



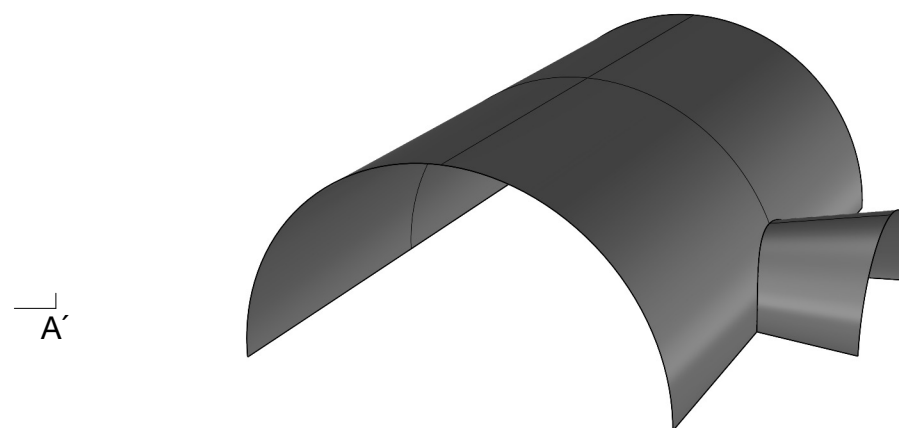
SIDE VIEW



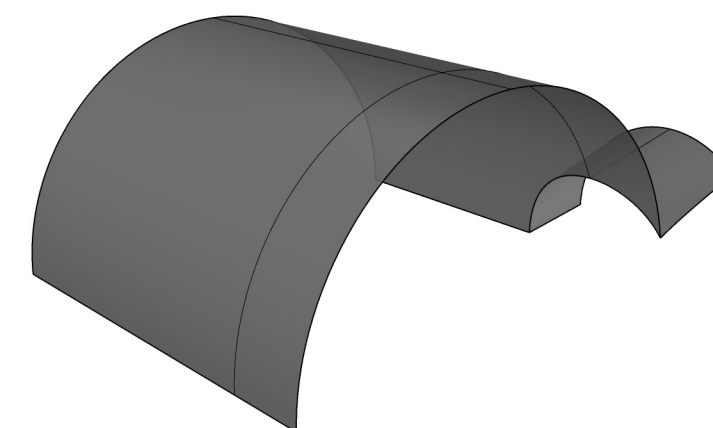
CORTE AA'



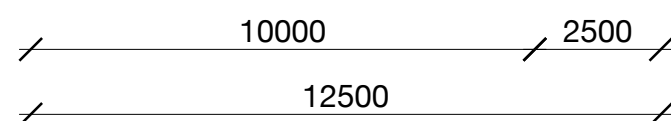
TOP VIEW



PERSPECTIVE VIEW



CORTE AA' PERSPECTIVE



ABÓBADA DE BERÇO COM LUNETAS CÓNICAS

1 / 150

LEILA BLUE - 20241201 - 2Hmiarq

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PROCESSO DE CONSTRUÇÃO

Copiar a estrutura da abóbada helicoidal.

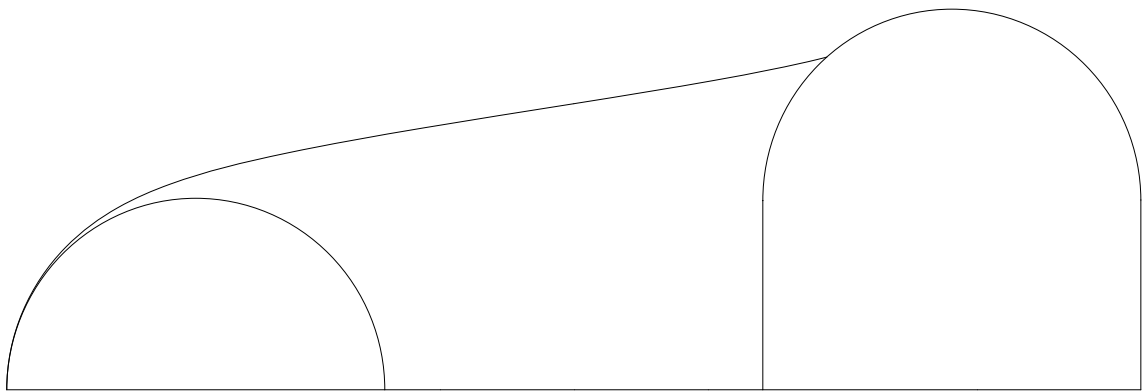
Criar um arco e uma hélice, medir o seu comprimento e usar essa medida para construir um triângulo no semicírculo (com uma altura de 5).

Fazer um retângulo e aplicar ExtrudeCrv na direção da hipotenusa.

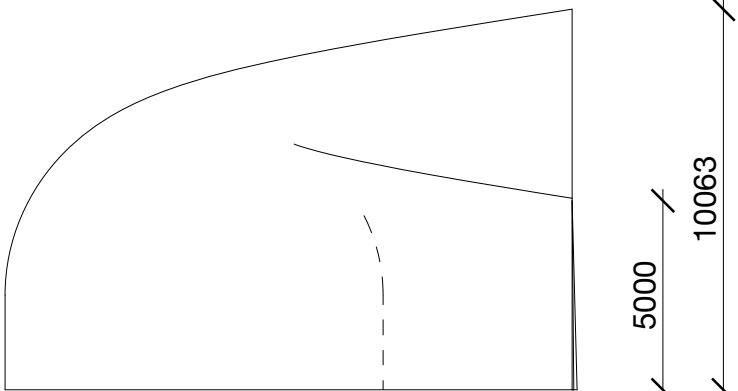
Rodar o semicírculo com Rotate3D e fazer Loft até à extremidade da extrusão.

Copiar a estrutura em altura e completar com Sweep2 e Loft.

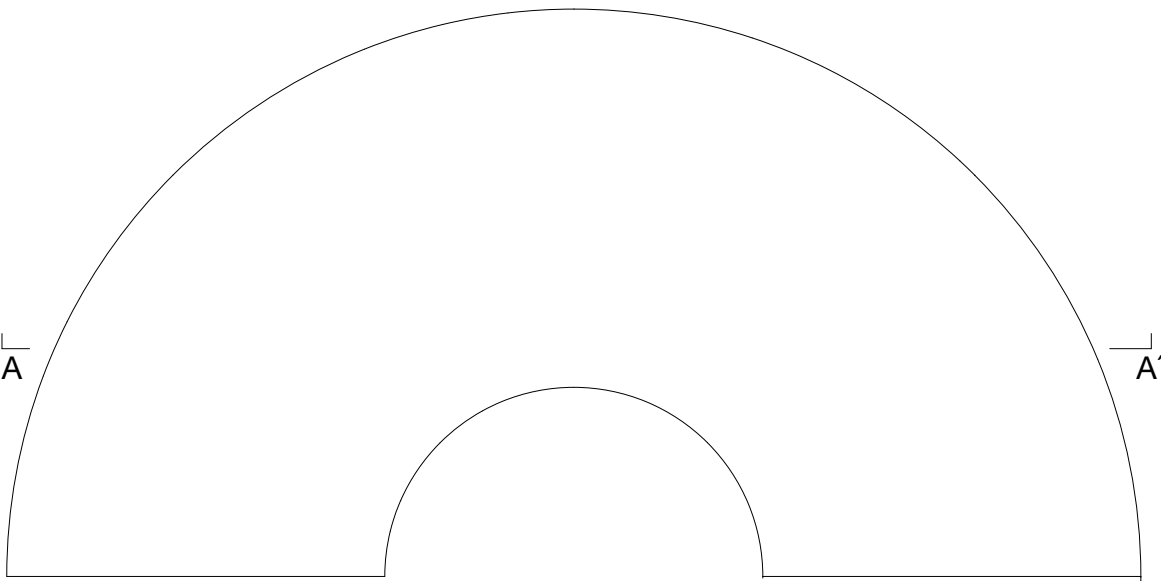
A diferença principal da abóbada helicoidal é a inclinação do arco inicial.



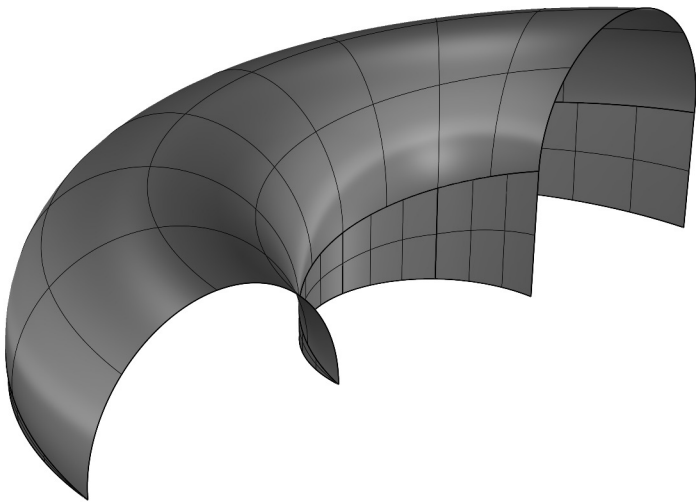
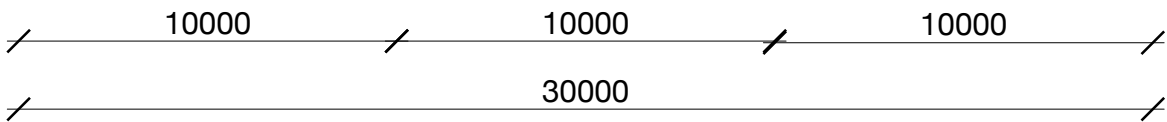
FRONT VIEW



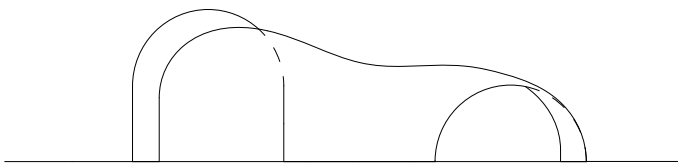
SIDE VIEW



TOP VIEW



PERSPECTIVE VIEW



CORTE AA'
1 / 500

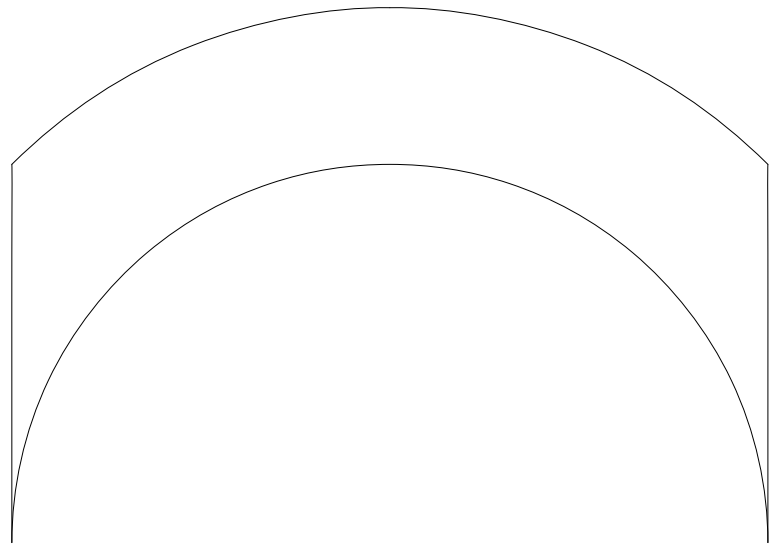
ABÓBADA DE
SAIN GILLES
1 / 200

LEILA BLUE - 20241201 - 2Hmiarq

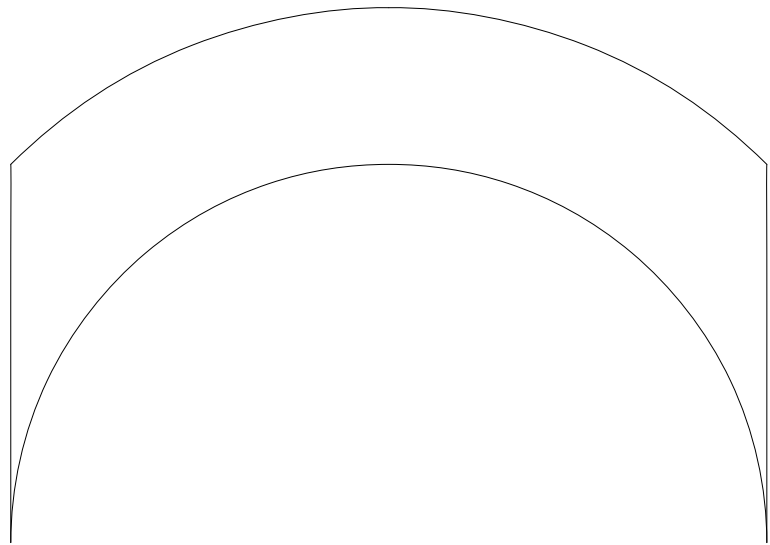
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PROCESSO DE CONSTRUÇÃO

A abóbada é gerada pela projeção PROJECT de um quadrado de lado 10 sobre uma superfície esférica (abóbada esférica) de raio 5, na qual de seguida se faz TRIM das partes laterais da forma que define a forma final da abóbada de vela.

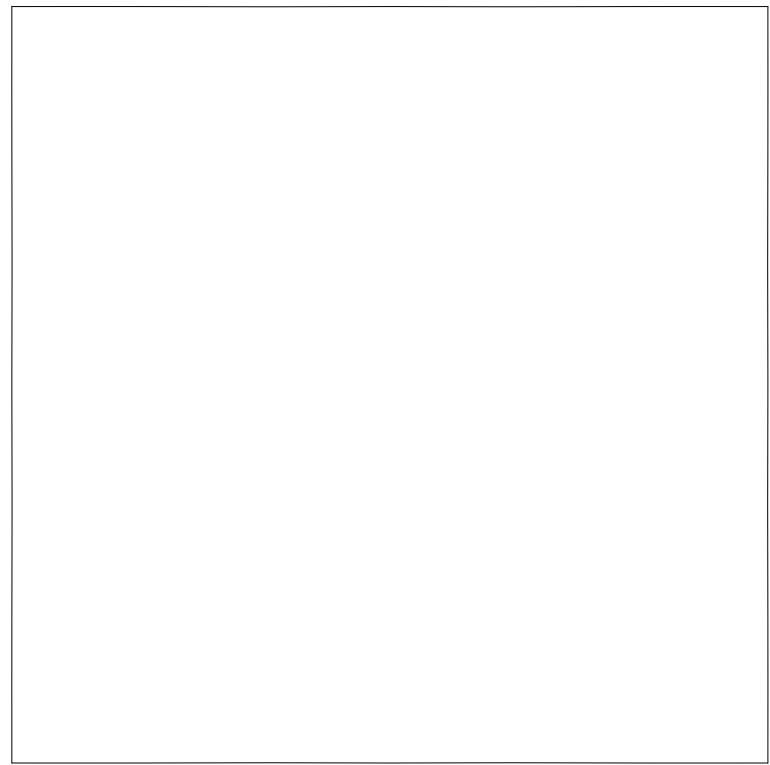


FRONT VIEW

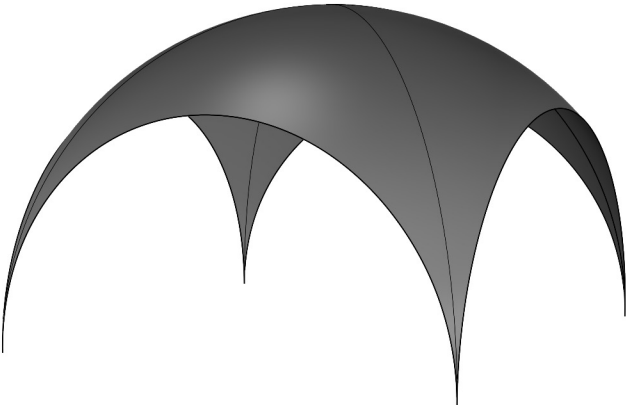


SIDE VIEW

5000

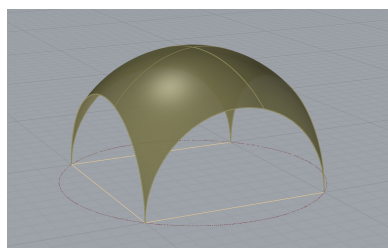
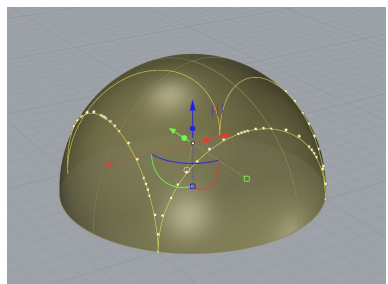
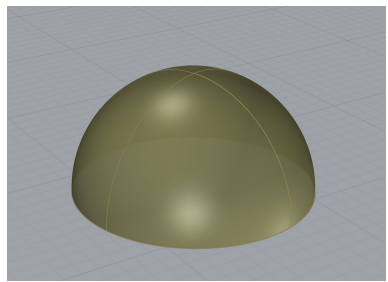
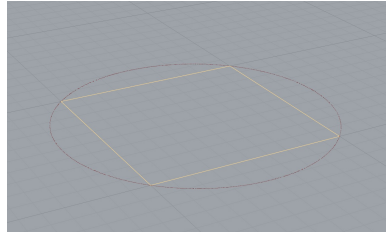


TOP VIEW



PERSPECTIVE VIEW

10000

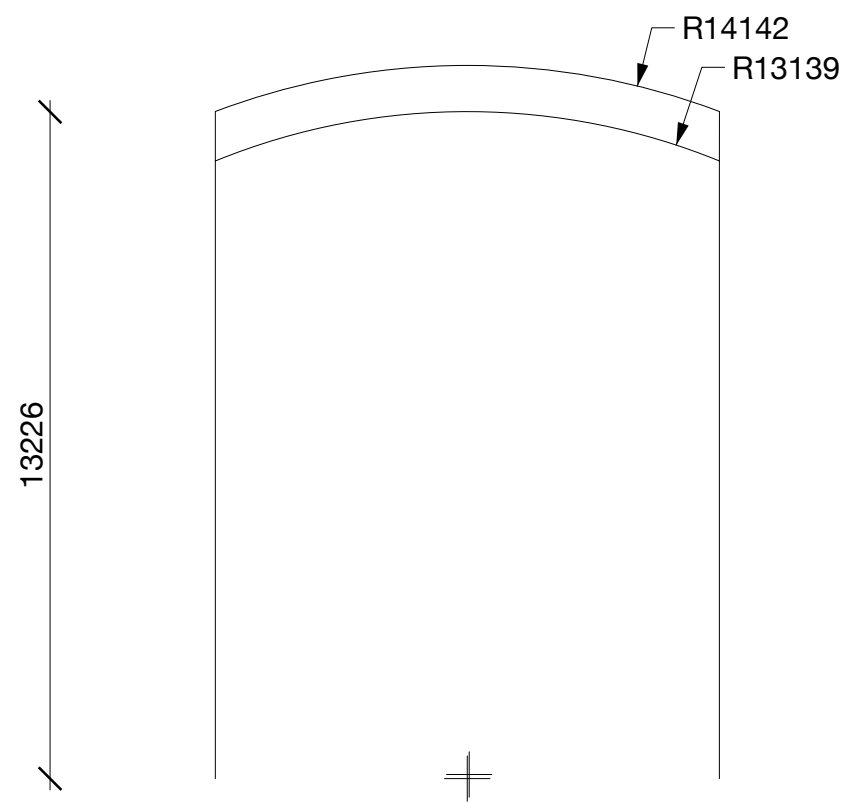


ABÓBADA DE VELA

1 / 100

LEILA BLUE - 20241201 - 2Hmiarq

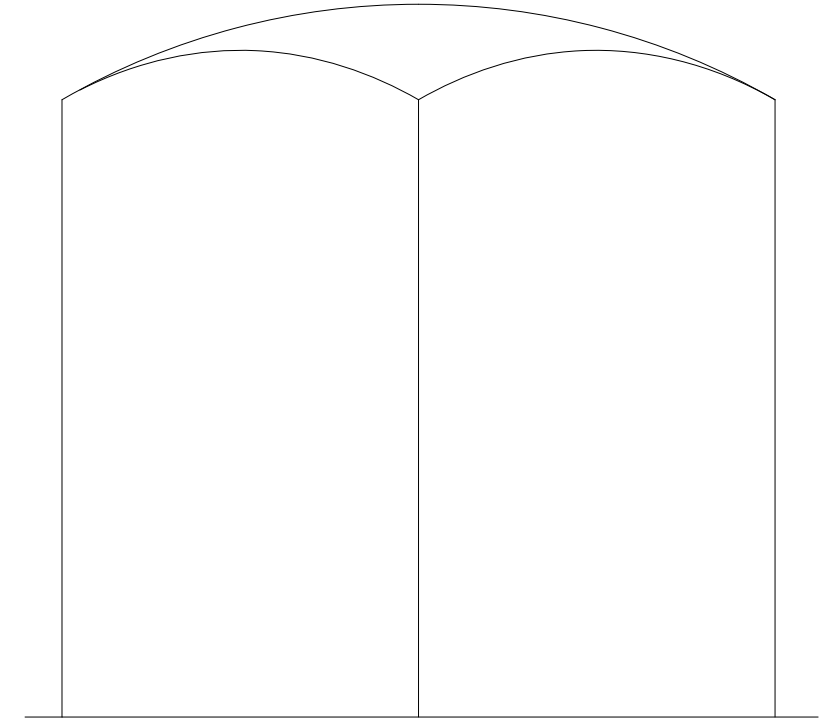
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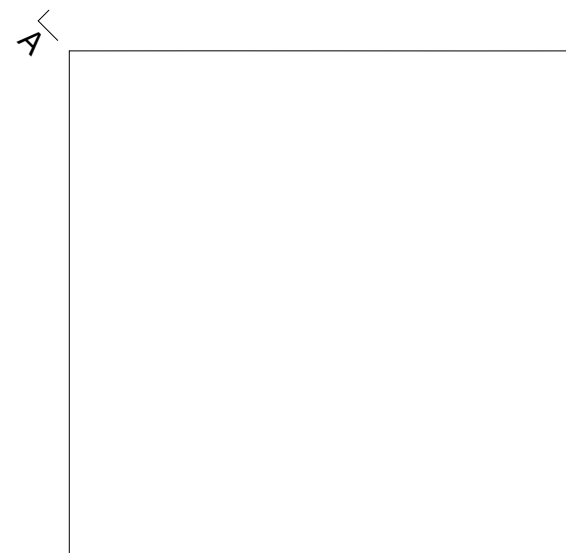
FRONT VIEW



SIDE VIEW

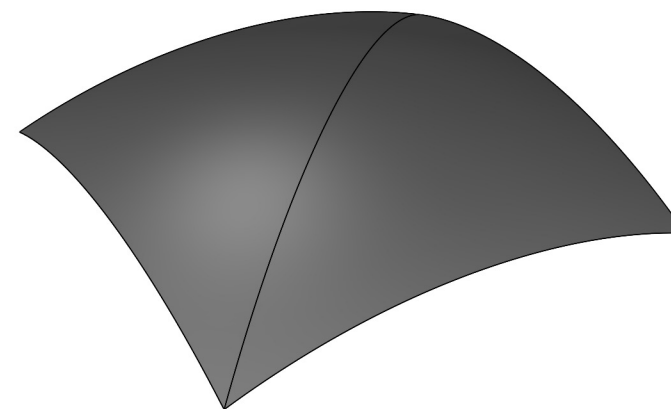


CORTE AA'

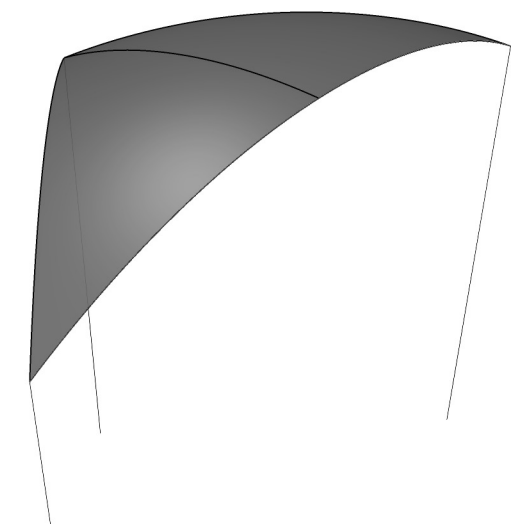


TOP VIEW

10000



PERSPECTIVE VIEW



CORTE AA' PERSPECTIVE

ABÓBADA CATALÃ

1 / 150

LEILA BLUE - 20241201 - 2Hmiarq

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PROCESSO DE CONSTRUÇÃO

A abóbada é construída a partir de um dodecágono, cujos lados servem de base para a criação de arcos que formam a directriz.

No centro, define-se uma geratriz através de uma construção geométrica (exemplificado no diagrama de construção ao lado) com arcos ligados entre si.

Esta geratriz é colocada na vertical e depois rodada ao longo dos arcos (RAILREVOLVER), gerando a superfície da abóbada.

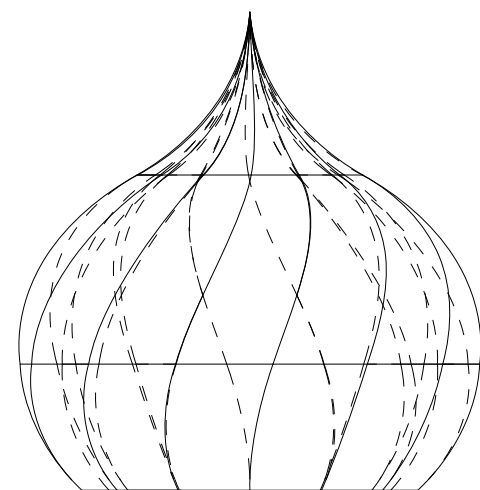
Para obter a forma característica com “gomos”, aplica-se uma torção de 4° à geratriz antes da revolução.

CORTE AA'

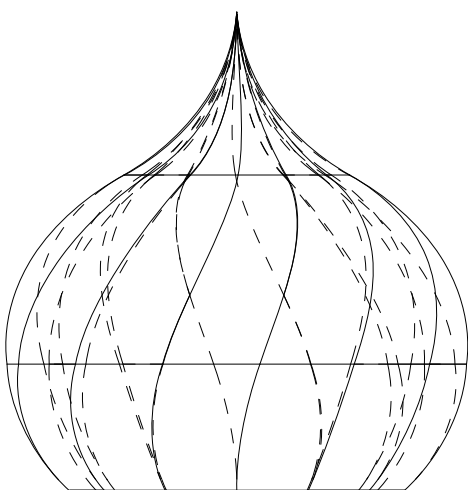
ABÓBADA ALVEOLADA
DE BOLBO
1 / 200

LEILA BLUE - 20241201 - 2Hmiarq

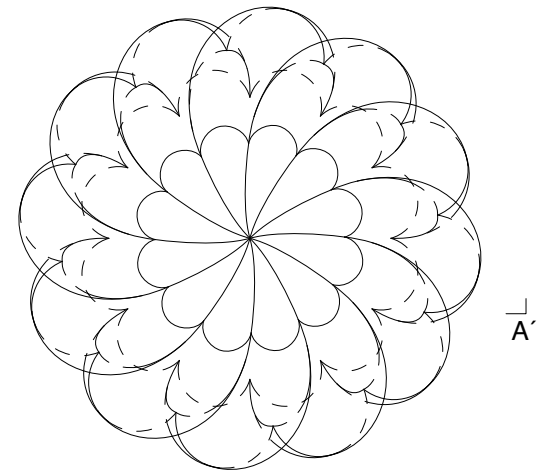
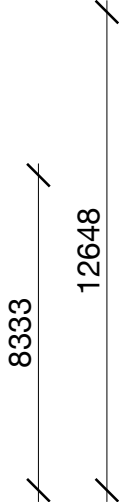
Modelação Geométrica e Generativa
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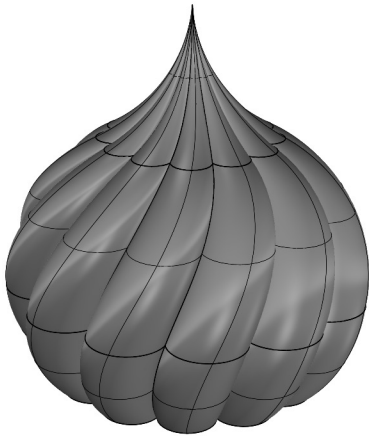
FRONT VIEW



SIDE VIEW



TOP VIEW



PERSPECTIVE VIEW

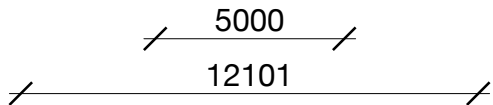
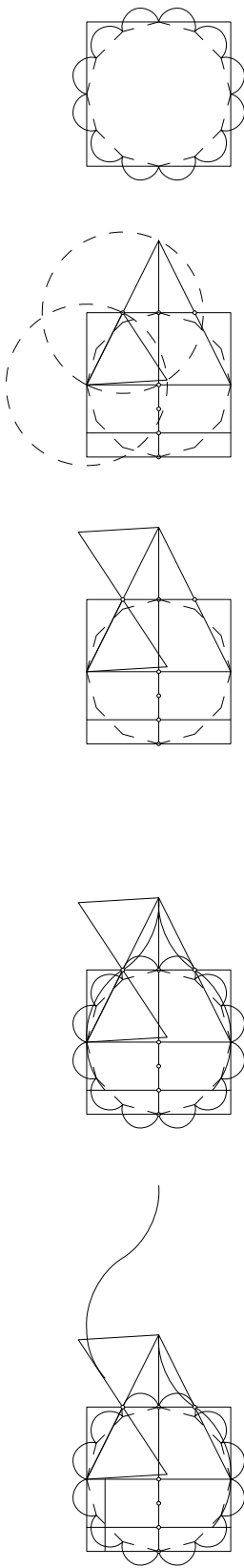
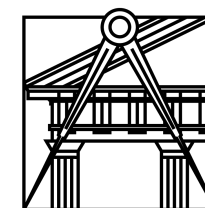


DIAGRAMA DE CONSTRUÇÃO
1 / 500





FIM DO TRABALHO II

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