

Geometria Espacial

Prof. André



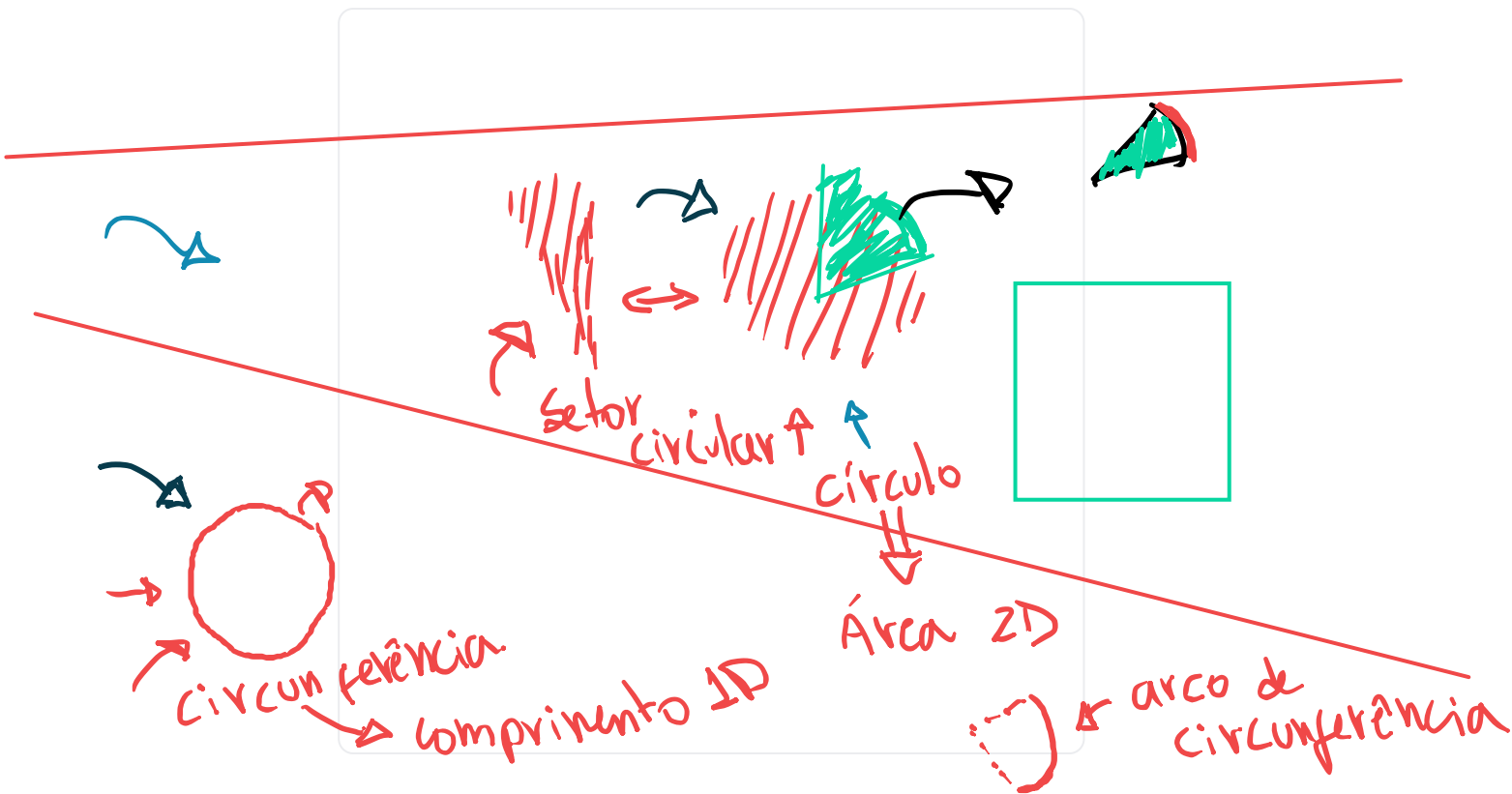
Introdução

1. Afinal, o que é Geometria Espacial?
2. Geometria Plana
3. Geometria Plana ➡ Geometria Espacial

Afinal, o que é Geometria Espacial?

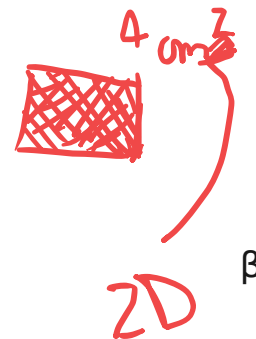
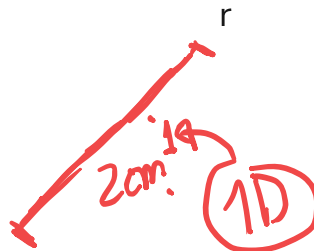
- É o estudo da geometria em um espaço tridimensional
- Se desenvolve a partir dos *conceitos primitivos* (ponto, reta e plano), e da definição do espaço
- A principal medida que surge na geometria espacial é o **volume**

Geometria Plana



Ponto, Reta e Plano

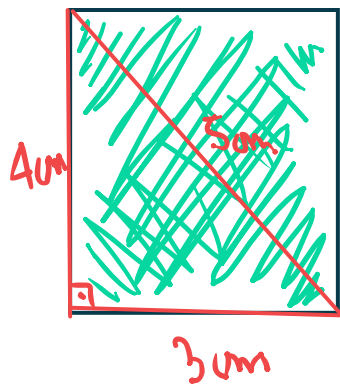
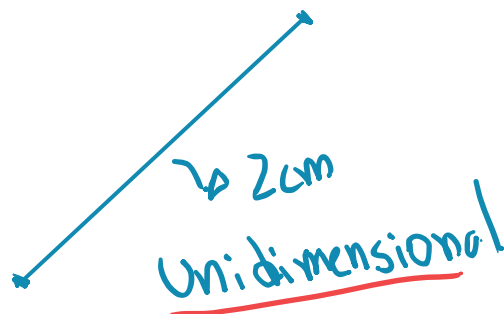
A



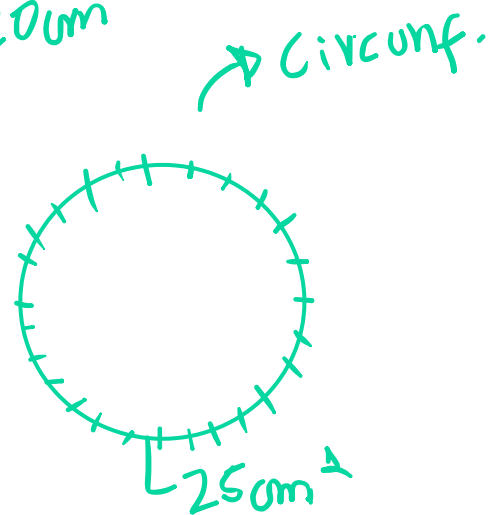
Dimensões

Adimensional e Unidimensional (1D)

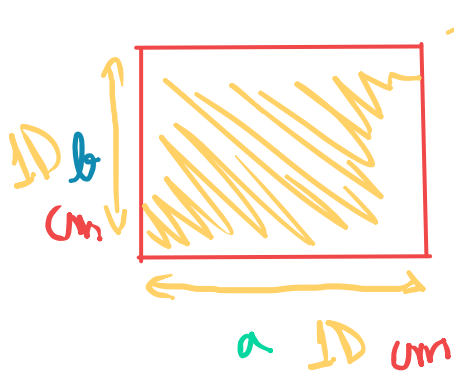
→ . adimensional



retângulo



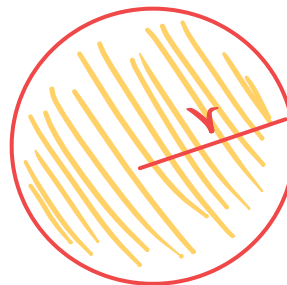
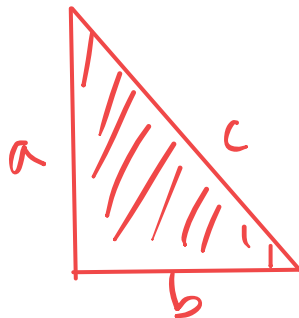
Dimensões Bidimensional



2D

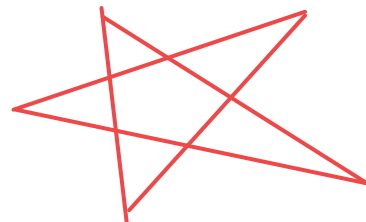
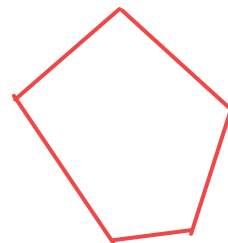
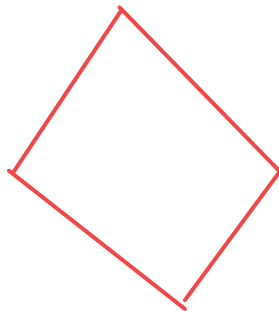
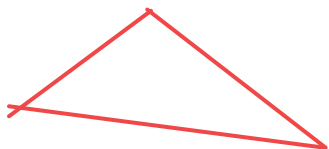
$$A = a \cdot b$$

cm . cm \Rightarrow cm²



Polígonos

- Definidos por segmentos de reta
- 3 pontos consecutivos que definem os segmentos não podem ser colineares

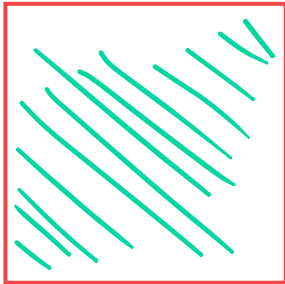


Polígonos

- Perímetro e Área

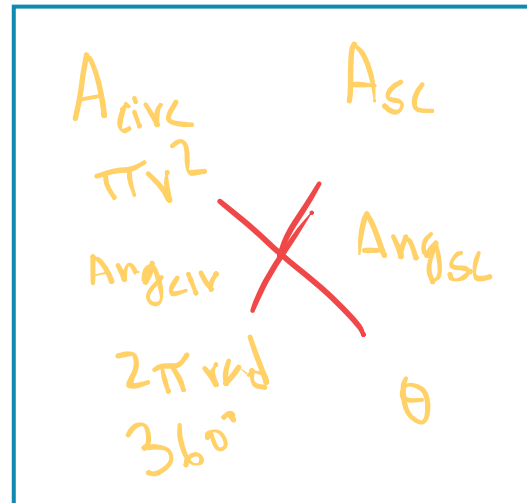
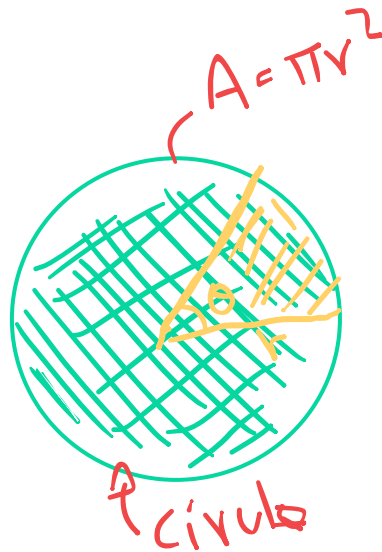
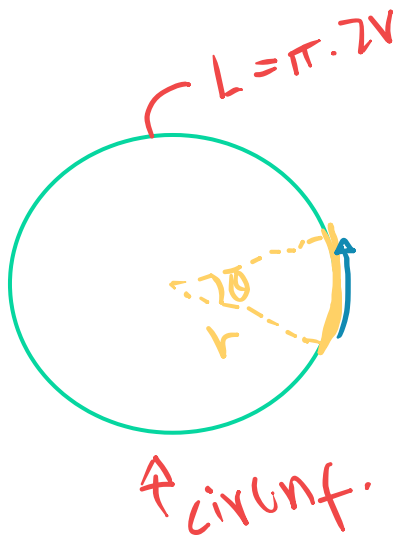
1D

2D



Circunferência e Círculo

- Importante: Arco de circunferência e setor circular



Circunferência e Círculo

- Comprimento e Área

Geometria Plana → Geometria Espacial

- 1D
 - Perímetro
 - Comprimento de circunferência e arco de circunferência
- 2D
 - Área de triângulo
 - Área de quadrilátero
 - Área de círculo e setor circular
- Geral
 - Conceitos primitivos
 - Semelhança de triângulos (especialmente triângulos retângulos)

Obrigado!