

Trabalho de Laboratório #1

Computação Gráfica

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The image displays two orthographic projections of a mechanical part on a grid. The top projection is the front view, and the bottom projection is the side view.

Front View (Top):

- The part is centered at the origin $(0,0)$ of the xz -plane.
- It features a circular base with a radius of 3 units, spanning from $x = -3$ to $x = 3$ and $z = -3$ to $z = 3$.
- A square feature is centered on the z -axis, with a side length of 6 units, spanning from $x = -3$ to $x = 3$ and $z = -3$ to $z = 3$.
- A horizontal bar is located at $z = -3$, spanning from $x = -3$ to $x = 3$, with a thickness of 0.5 units.
- A vertical stem is located at $x = 0$, spanning from $z = -3$ to $z = 3$, with a width of 1 unit and a height of 6 units.
- Dimensions are indicated with purple lines and numbers: 1.5, 1.5, 6, 0.5, 3, 0.5.

Side View (Bottom):

- The part is centered at the origin $(0,0)$ of the xy -plane.
- It features a circular base with a radius of 3 units, spanning from $y = -3$ to $y = 3$ and $x = -3$ to $x = 3$.
- A square feature is centered on the x -axis, with a side length of 6 units, spanning from $y = -3$ to $y = 3$ and $x = -3$ to $x = 3$.
- A horizontal bar is located at $x = -3$, spanning from $y = -3$ to $y = 3$, with a thickness of 0.5 units.
- A vertical stem is located at $y = 0$, spanning from $x = -3$ to $x = 3$, with a width of 1 unit and a height of 6 units.
- Dimensions are indicated with purple lines and numbers: 3, 1, 0.5, 5, 6, 2, 1, 3, 4, 8, 0.

Grafo de Cena

Grafo de Cena

Admitindo que todos os objetos, inicialmente, estão centrados no ponto (0, 0, 0):

