Aula 20b - 1.3/1c

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• Determinante:

$$\text{rot}\,\vec{F} = \begin{vmatrix} \vec{i} & \vec{j} & \vec{k} \\ \frac{\partial}{\partial x} & \frac{\partial}{\partial y} & \frac{\partial}{\partial z} \\ yz & xz & xy \end{vmatrix}$$

$$\vec{i}\cdot\begin{vmatrix} \frac{\partial}{\partial y} & \frac{\partial}{\partial z} \\ xz & xy \end{vmatrix} - \vec{j}\cdot\begin{vmatrix} \frac{\partial}{\partial x} & \frac{\partial}{\partial x} \\ yz & xy \end{vmatrix} + \vec{k}\begin{vmatrix} \frac{\partial}{\partial x} & \frac{\partial}{\partial y} \\ yz & xz \end{vmatrix} = i(x-x) - j(y-y) + k(z-z)$$

$\Rightarrow (0,0,0)$

Portanto $\text{rot}\,\vec{F} = (0,0,0)$