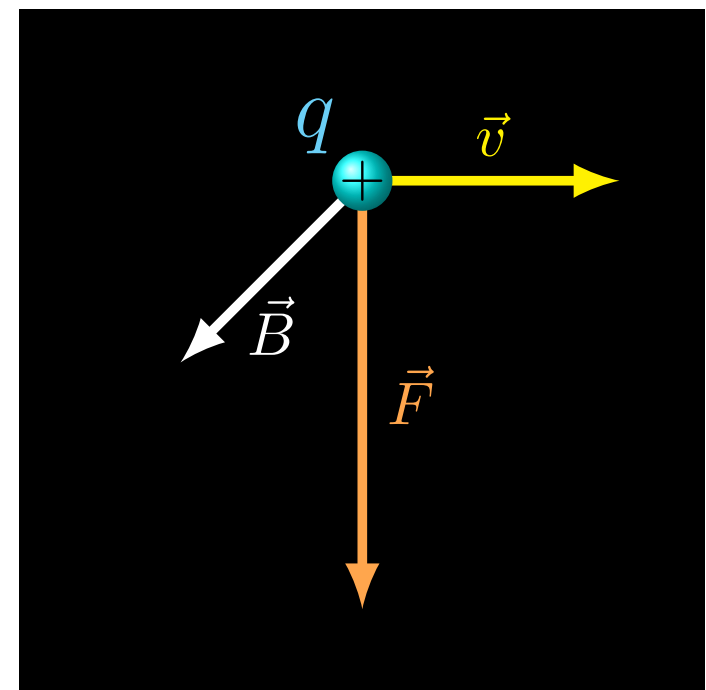


# Física III

*Aula remota de 19/05/2020*  
*Campo magnético*



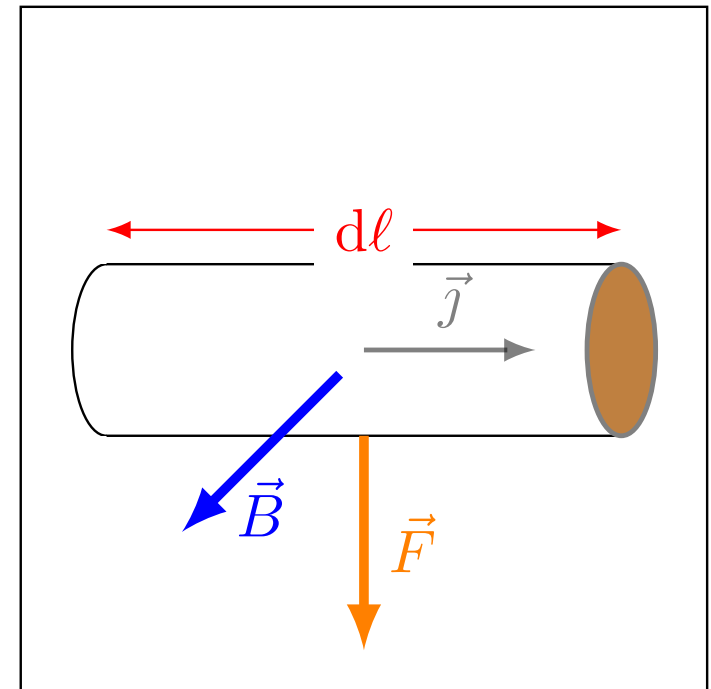
# Força sobre fio

$$\vec{j} = \rho \vec{v}$$

$$dq = \rho A d\ell$$

$$d\vec{F} = \rho A d\ell \vec{v} \times \vec{B}$$

$$d\vec{F} = A d\ell \vec{j} \times \vec{B}$$



$$d\vec{F} = I d\vec{\ell} \times \vec{B}$$

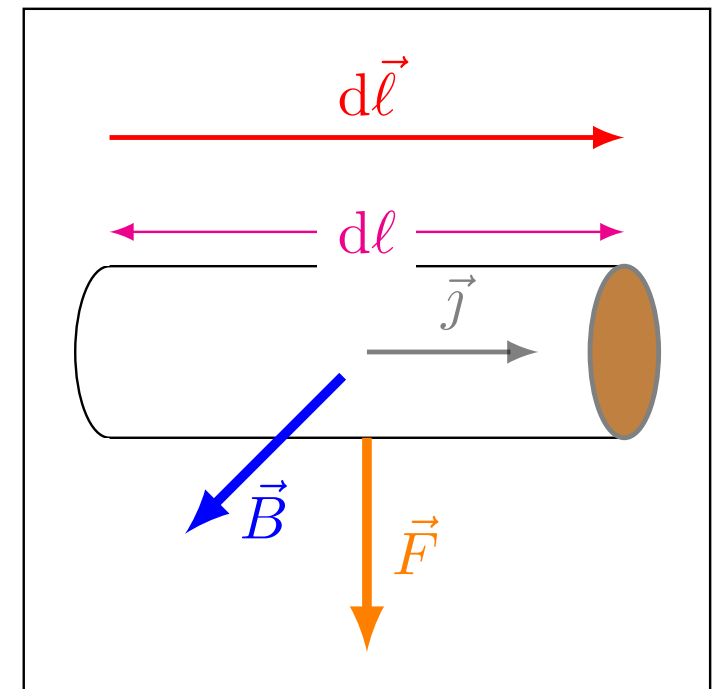
# Força sobre fio

$$\vec{j} = \rho \vec{v}$$

$$dq = \rho A d\ell$$

$$d\vec{F} = \rho A d\ell \vec{v} \times \vec{B}$$

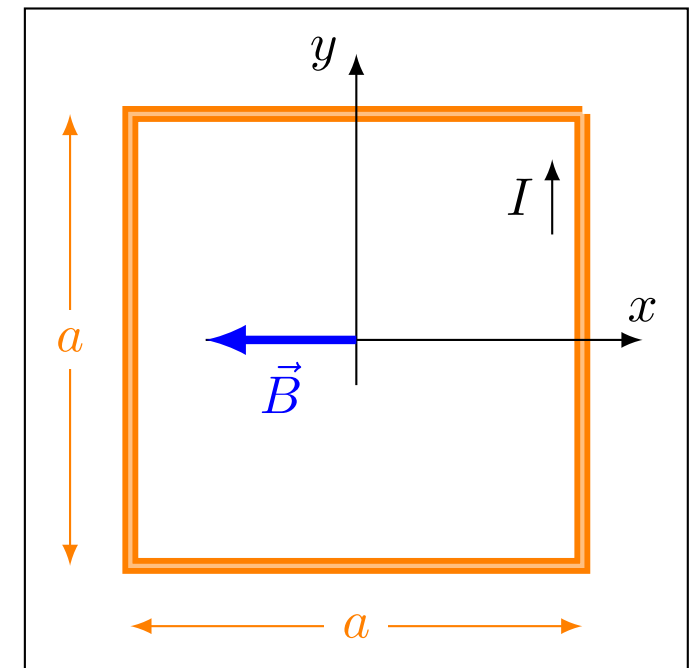
$$d\vec{F} = A d\ell \vec{j} \times \vec{B}$$



$$d\vec{F} = I d\vec{\ell} \times \vec{B}$$

# Pratique o que aprendeu

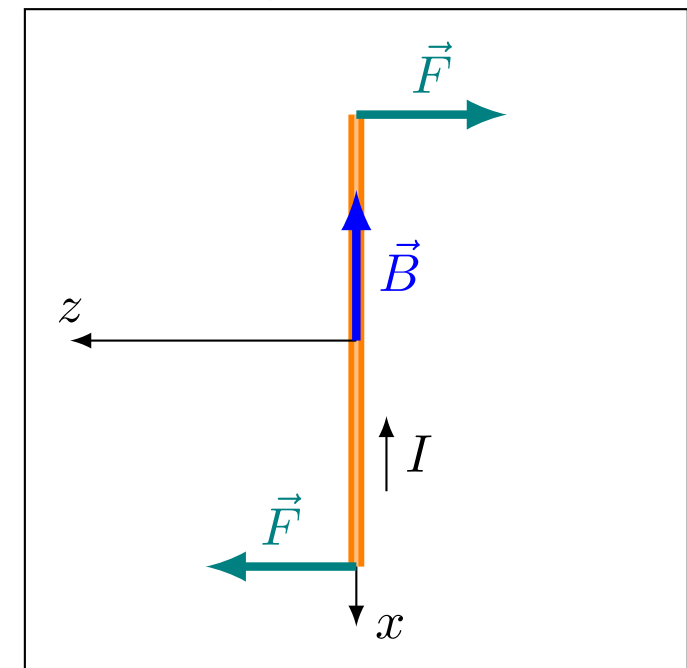
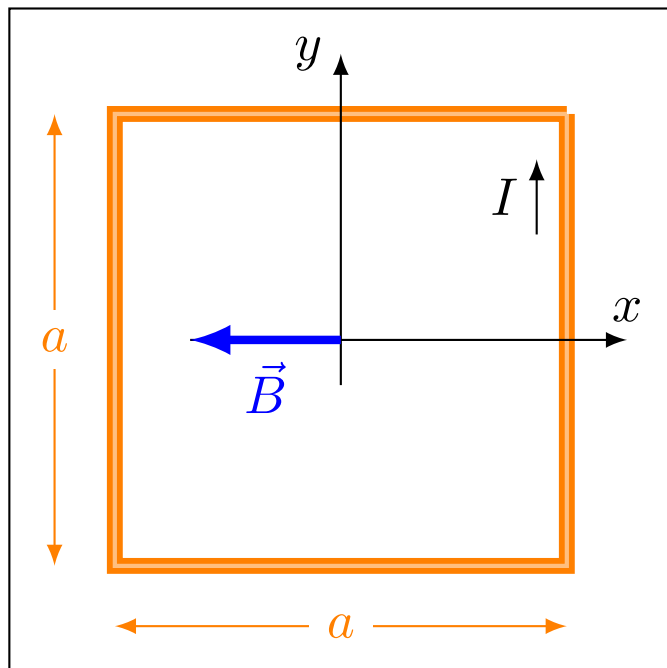
## Torque sobre circuito





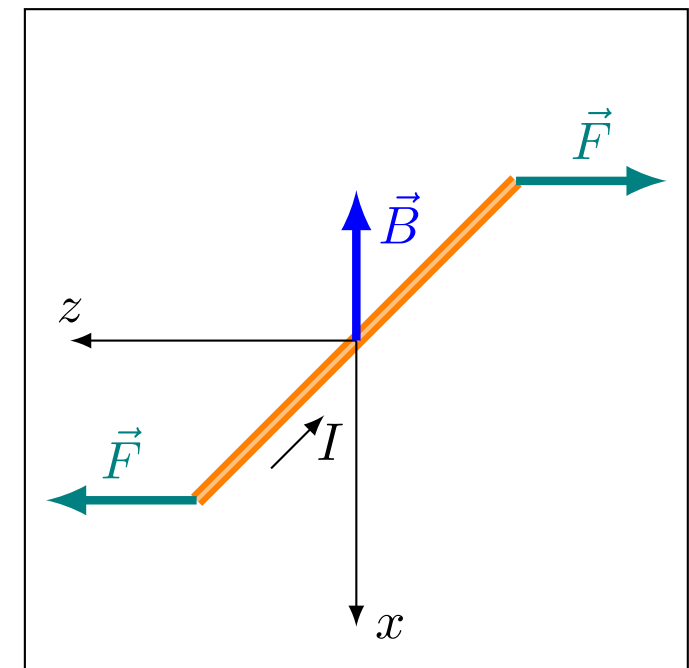
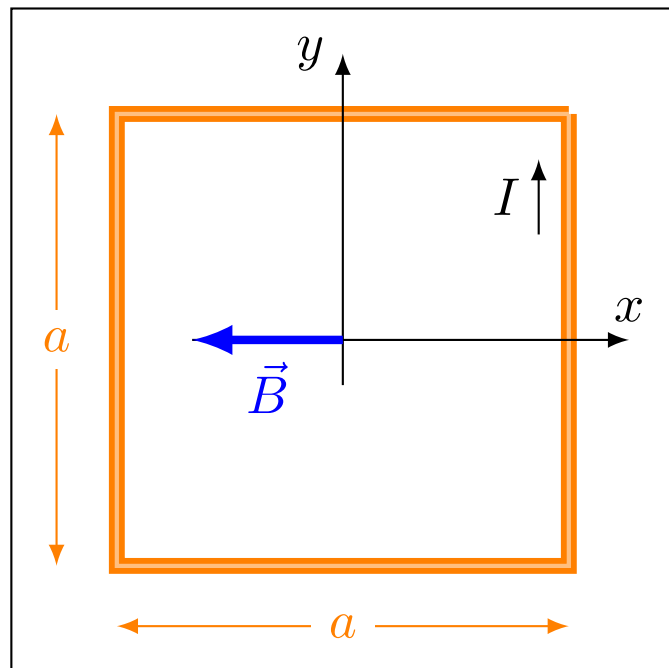
# Pratique o que aprendeu

## Torque sobre circuito



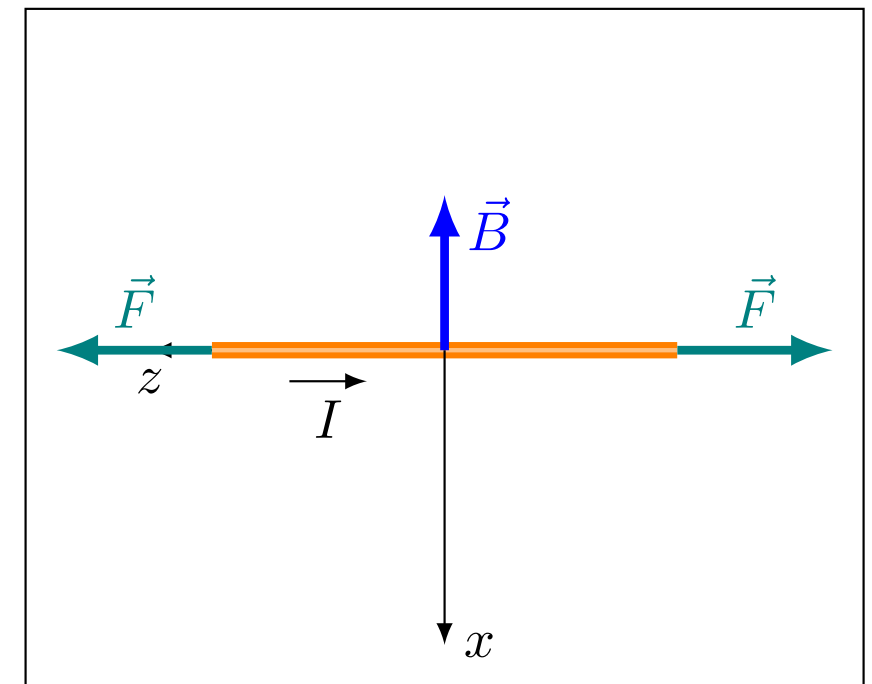
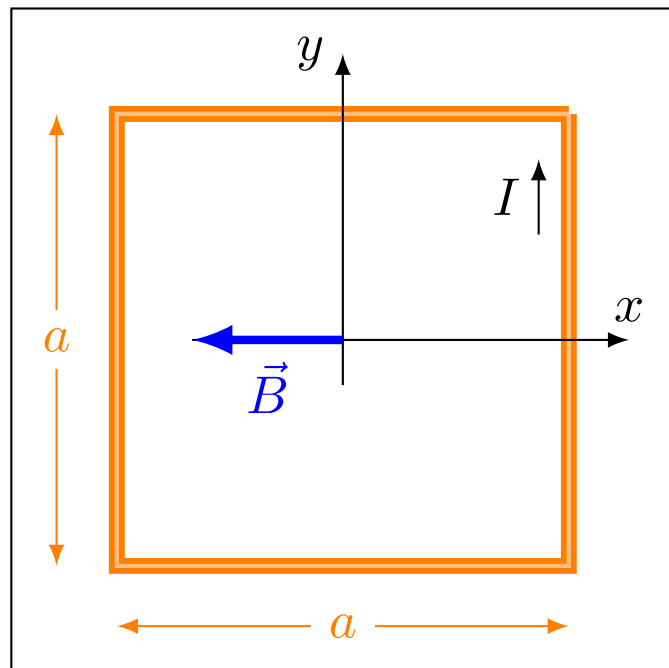
# Pratique o que aprendeu

## Torque sobre circuito



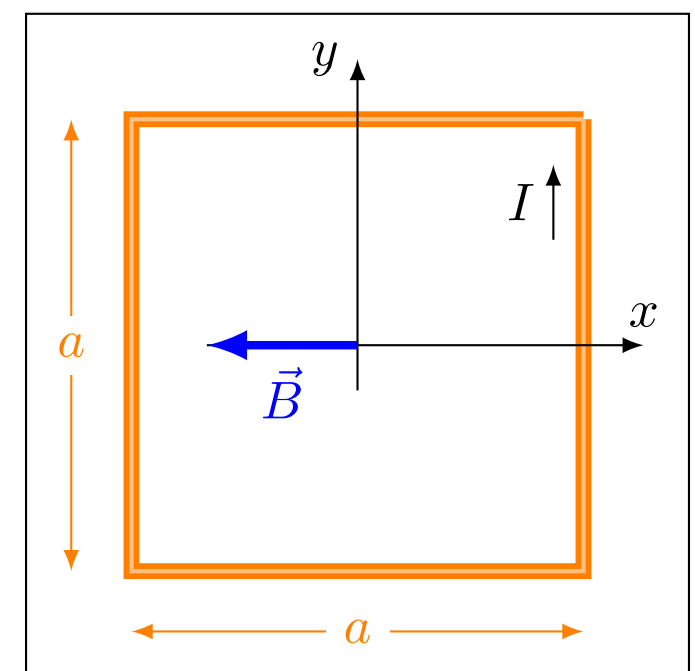
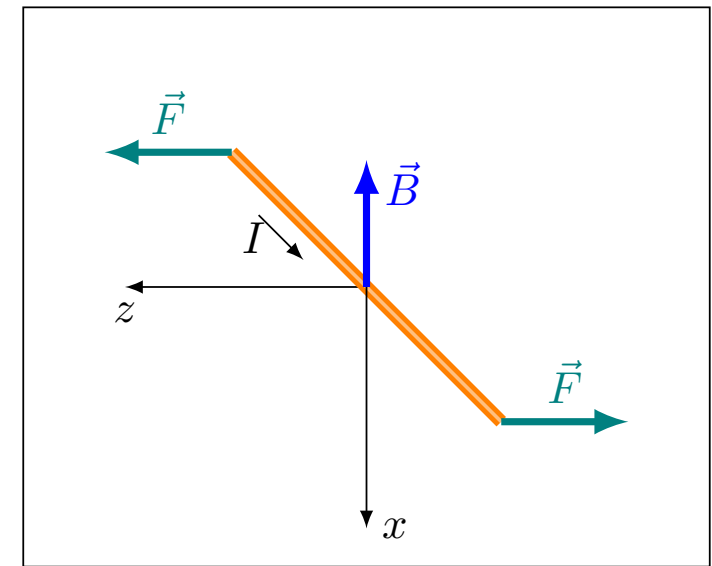
# Pratique o que aprendeu

## Torque sobre circuito

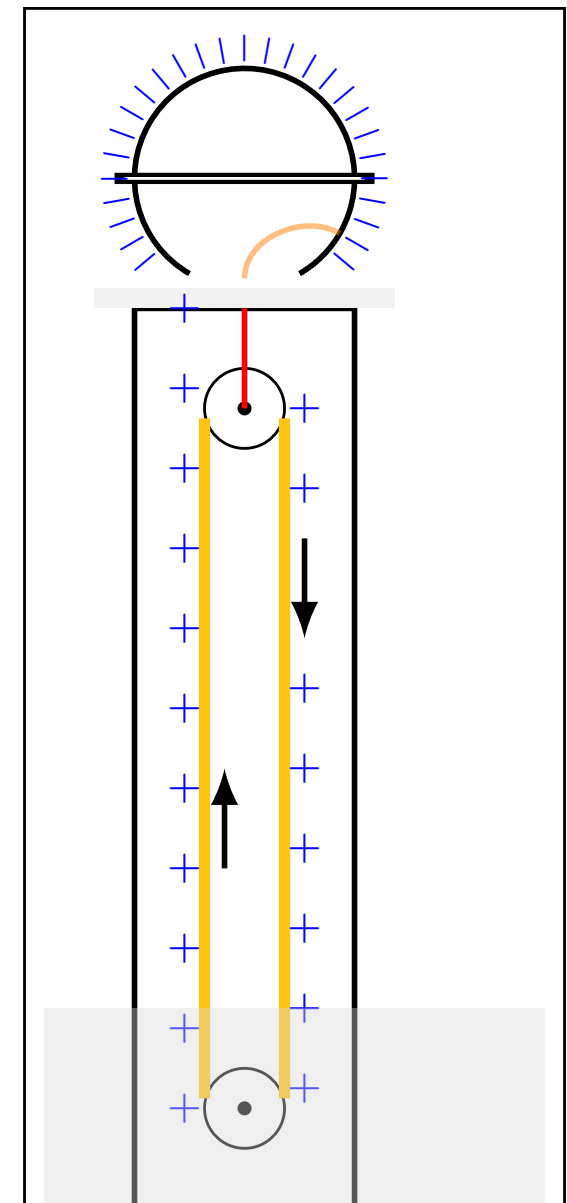


# Pratique o que aprendeu

## Torque sobre circuito



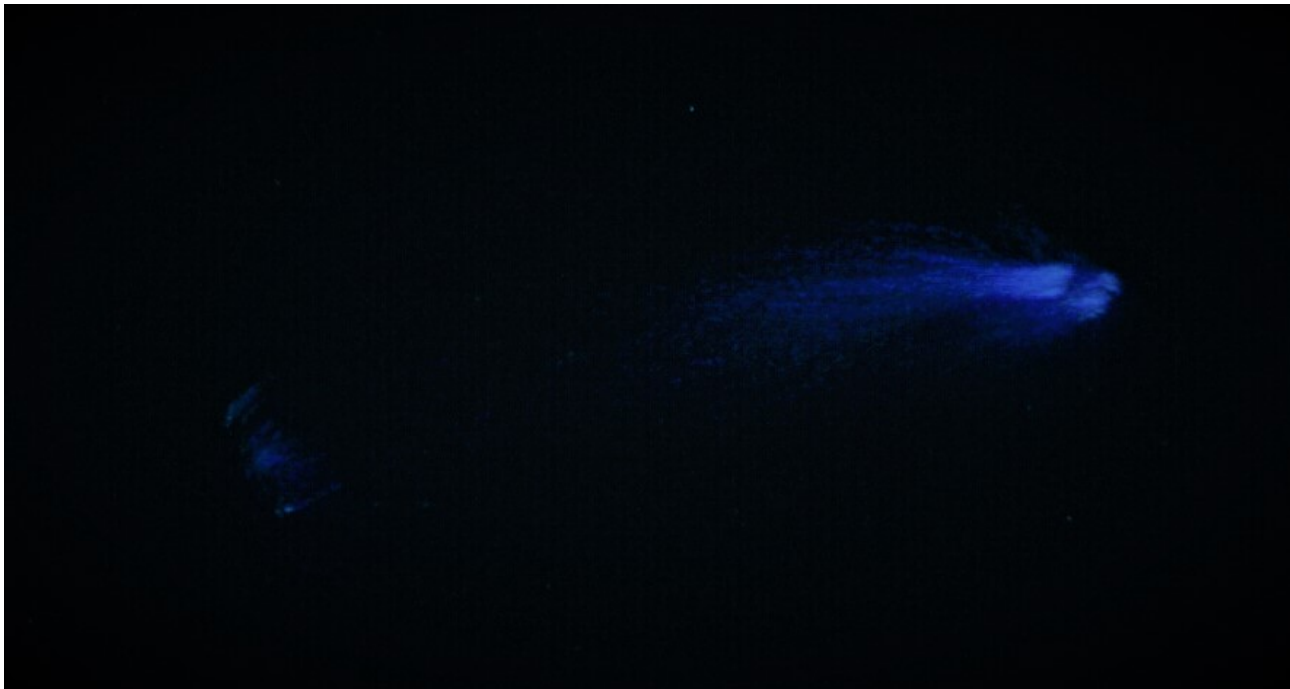
# Descargas eléctricas



# Descargas eléctricas



# Descargas eléctricas



# Descargas eléctricas



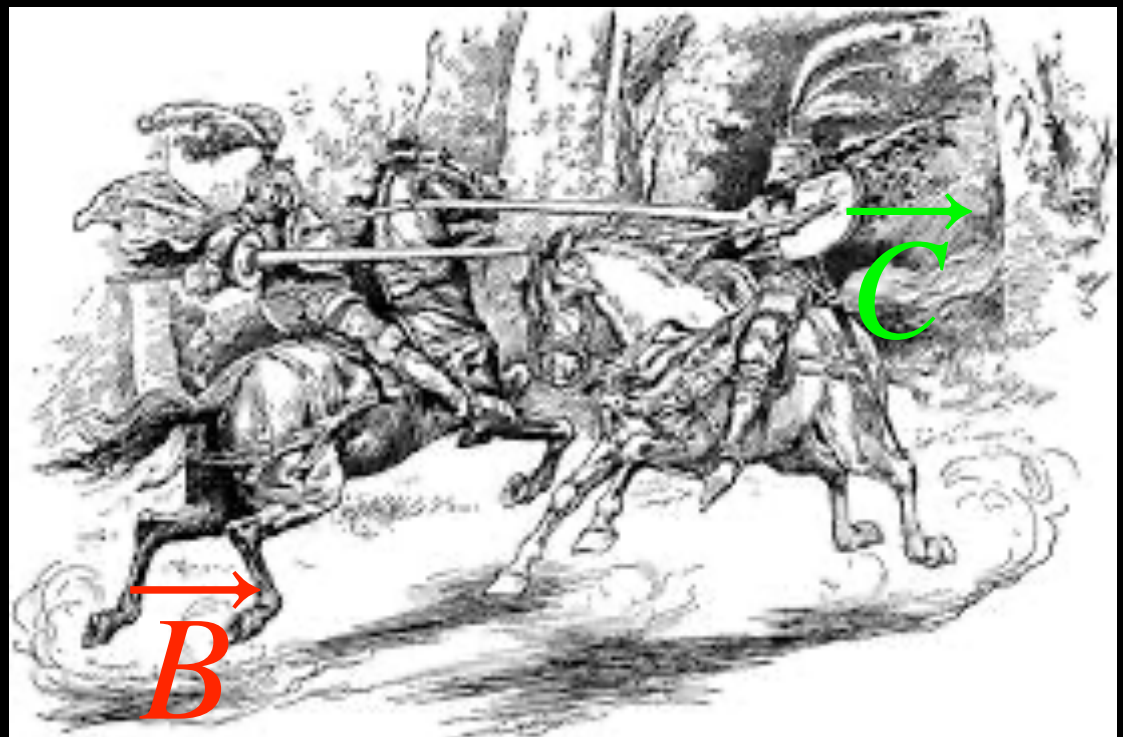


# Duplo produto vetorial

$$\vec{D} = \vec{A} \times (\vec{B} \times \vec{C})$$

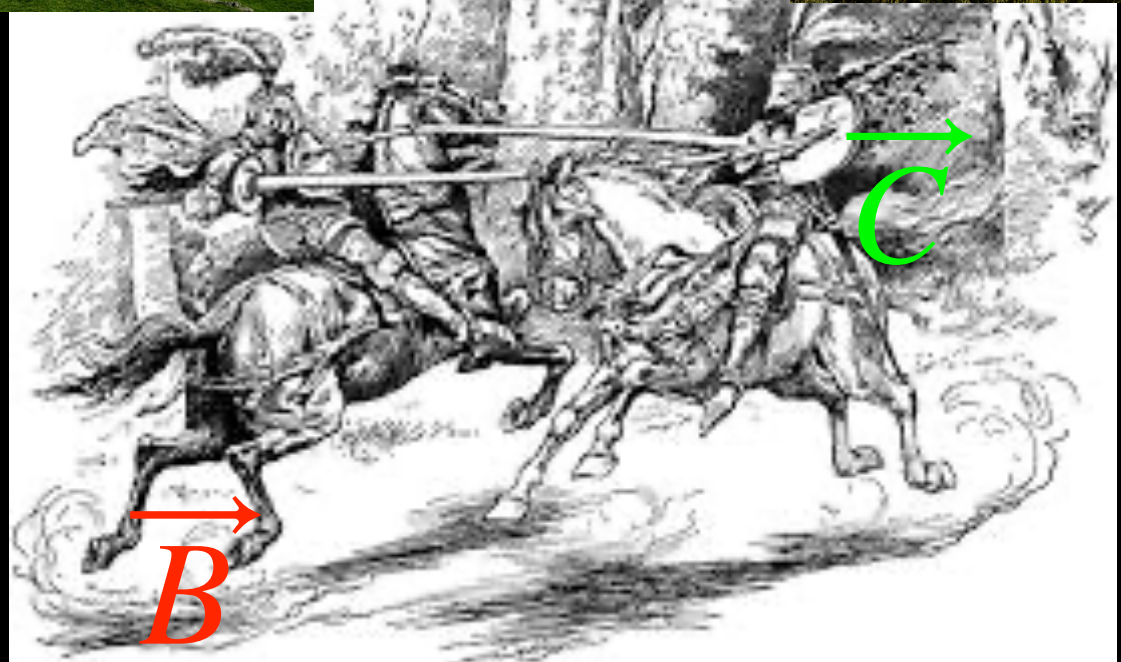
# Duplo produto vetorial

$$\vec{D} = \vec{A} \times (\vec{B} \times \vec{C})$$



# Duplo produto vetorial

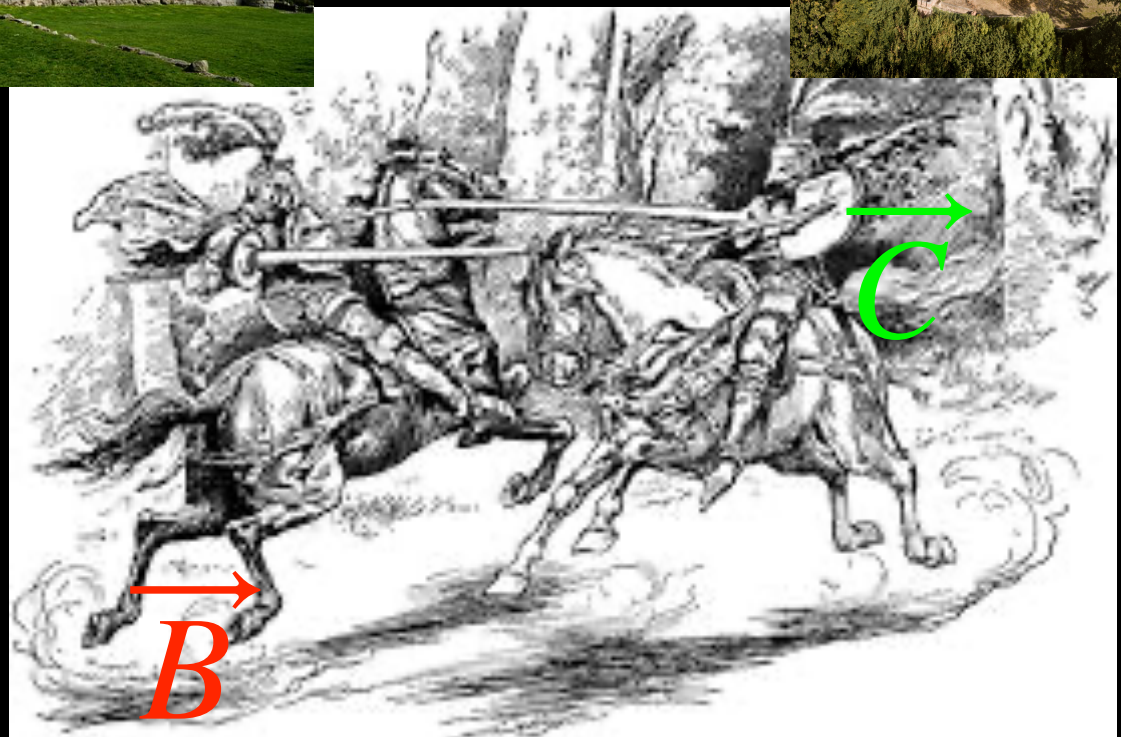
$$\vec{D} = \vec{A} \times (\vec{B} \times \vec{C})$$





# Duplo produto vetorial

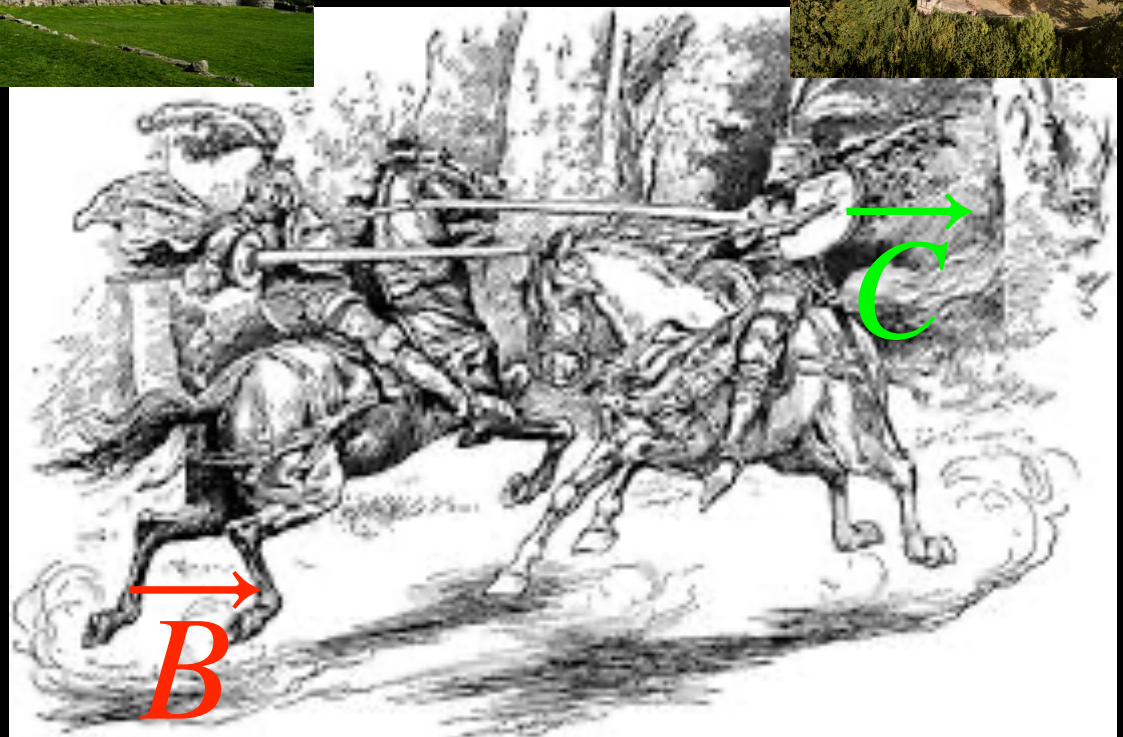
$$\vec{A} \times (\vec{B} \times \vec{C}) = ?(\vec{A} \cdot \vec{B})\vec{C} \quad ?(\vec{A} \cdot \vec{C})\vec{B}$$





# Duplo produto vetorial

$$\vec{A} \times (\vec{B} \times \vec{C}) = -(\vec{A} \cdot \vec{B})\vec{C} + (\vec{A} \cdot \vec{C})\vec{B}$$



# Duplo produto vetorial

$$\vec{A} \times (\vec{B} \times \vec{C}) = -(\vec{A} \cdot \vec{B})\vec{C} + (\vec{A} \cdot \vec{C})\vec{B}$$