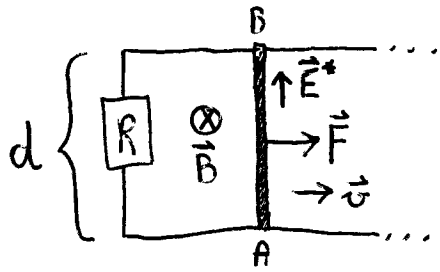


12.)



a.)  $v_{max} = ?$

b.)  $I_{max} = ?$

$$\vec{E}^* = \vec{v} \times \vec{B}$$

$$\mathcal{E}_{AB} = \int_A^B (\vec{v} \times \vec{B}) \cdot d\vec{s}$$

$$P = \vec{F} \cdot \vec{v} \quad P = \frac{\mathcal{E}^2}{R}$$

a.)  $\vec{v} \perp \vec{B}$  és  $\vec{E}^* \parallel d\vec{s}$

$E^* = vB$  állandó a rúd mentén

$$\mathcal{E}_{AB} = vBd = \mathcal{E}$$

Ha  $v = v_{max}$   $P_F = P_R$

$$F \cdot v_{max} = \frac{\mathcal{E}_{max}^2}{R}$$

$$F \cdot v_{max} = \frac{v_{max}^2 B^2 d^2}{R}$$

$\Downarrow$   
 $v_{max}$

b.)

$$I_{max} = \frac{\mathcal{E}_{max}}{R} = \frac{Bd v_{max}}{R} = \dots$$