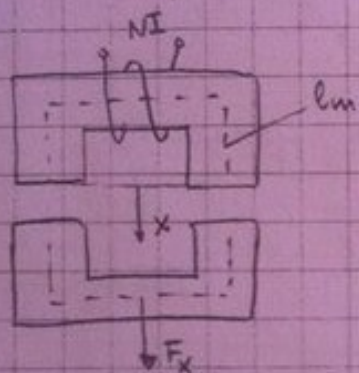


# Elektromagnet



$$R_m = \frac{1}{\mu} \frac{l}{S}$$

$$R_m = \frac{1}{\mu} \frac{l_m}{S_m}$$

$$R_\delta = \frac{1}{\mu_0} \frac{2\delta}{S_m}$$

senja, kot se ugotovi  
ve prava

$$(I = \frac{U}{R})$$

$$\phi = \frac{NI}{R_m + R_\delta} = \frac{NI}{\frac{1}{\mu} \frac{l_m}{S_m} + \frac{2}{\mu_0} \frac{\delta}{S_m}}$$

$$L = \frac{\psi}{I} = \frac{N \cdot \phi}{I} = \frac{N^2}{\frac{1}{\mu} \frac{l_m}{S_m} + \frac{2}{\mu_0} \frac{\delta}{S_m}}$$

$$W = \frac{LI^2}{2} \quad \vec{F}_\delta = \vec{a}_\delta \frac{\partial W}{\partial \delta} = \vec{a}_\delta N^2 I^2 \cdot \frac{\partial}{\partial \delta} \left( \frac{1}{\frac{1}{\mu} \frac{l_m}{S_m} + \frac{2}{\mu_0} \frac{\delta}{S_m}} \right)$$

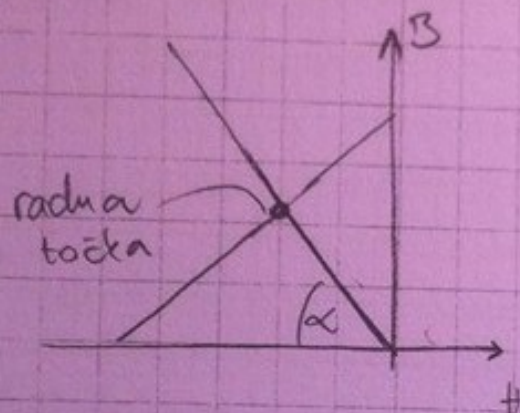
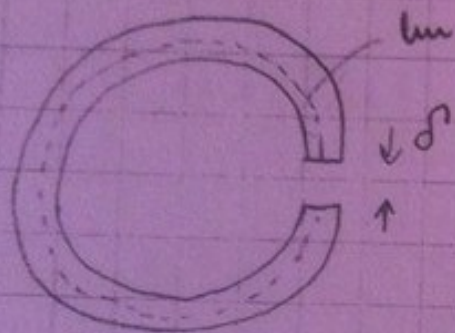
$$= -\vec{a}_\delta \frac{N^2 I^2}{2} \cdot \frac{1}{\left( \frac{1}{\mu} \frac{l_m}{S_m} + \frac{2}{\mu_0} \frac{\delta}{S_m} \right)^2} \cdot \frac{2}{\mu_0 S_m} = -\vec{a}_\delta \frac{\phi^2}{\mu_0 S_m}$$

$$= -\vec{a}_\delta \frac{\vec{B}_\delta \cdot \vec{B}_\delta \cdot S_m^2}{\mu_0 S_m} = (-\vec{a}_\delta \vec{B}_\delta \cdot \vec{H}_\delta \cdot S_m)$$

→ prilezna kila



## Permanentni magnet

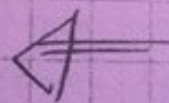


$$\oint_C \vec{H} \cdot d\vec{l} = NI = 0$$

$$H_\delta \cdot \delta + H_m \cdot l_m = 0$$

$$H_m = - H_\delta \frac{\delta}{l_m}$$

$$H_m = - \frac{B_m}{\mu_0} \cdot \frac{\delta}{l_m}$$



$$H_m = - \frac{B_\delta}{\mu_0} \cdot \frac{\delta}{l_m}$$

$$\tan \alpha = \frac{B_m}{H_m} = -\mu_0 \frac{l_m}{\delta}$$

Elektromagnetska indukcija