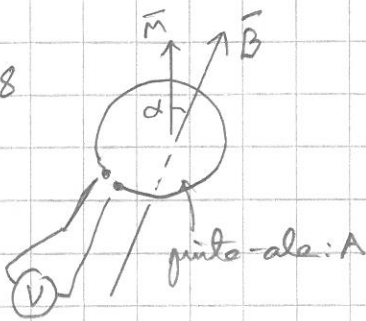


11. Magnetismi

11.8



Magneettivuono: $\Phi = BA \cdot \cos \alpha$

ilmuusa normaali-
vektori

$\alpha = \angle(\vec{n}, \vec{B})$

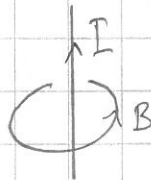
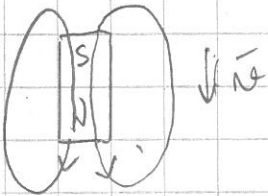
(ilmuusa laji menevies sentteriisija lkm)

Induktiijomite $e = -\frac{d\Phi}{dt} = -\Phi'(t)$

lennin laki

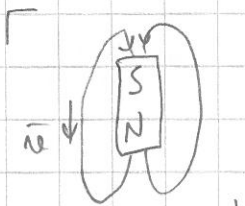
- a) γ α muutuu $\rightarrow \Phi$ muutuu
- b) γ B - " - $\rightarrow \Phi$ - " -
- c) γ α - " - $\rightarrow \Phi$ - " -
- d) \checkmark Φ vakio

11.9 a)



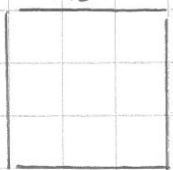
Samaa magneetti putose lhemmer kuperiilmukka
 $\rightarrow \Phi$ kassee \rightarrow induktiijomite $e = -\frac{d\Phi}{dt} \rightarrow$ induktiivis
 vito $i \rightarrow$ induktiivis $\vec{B}_i \rightarrow$ magneettiventel
 hylkiviet korraon (kassee "kaannu magneetti
 solitioiden N ja S suunnat) (lennin laki ja oisear
 koda seanda) \rightarrow magneetti vapens pierence

lusei α erite \rightarrow induktiijomite e ri arhente
 induktiivis i

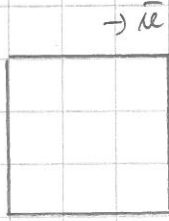
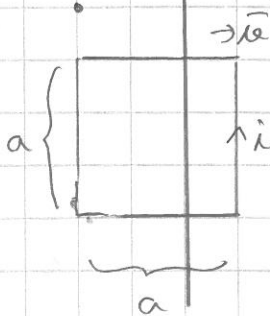


b)

11.15
 $\rightarrow \vec{v}$



\vec{B} | $\vec{B} = \vec{0}$



- $a = 11 \text{ cm}$
- $v = 10,0 \frac{\text{cm}}{\text{s}}$
- $R = 0,075 \Omega$
- $B = 1,0 \text{ T}$

$\Phi = BA$ vakio

$\rightarrow e = -\frac{d\Phi}{dt} = 0$

$\rightarrow i = 0$

Induktiijomite: $\rightarrow i = 0$

$e = -\frac{d\Phi}{dt} = -\frac{\Delta\Phi}{\Delta t} = -\frac{\Phi_2 - \Phi_1}{\Delta t} = -\frac{0 - BA}{\Delta t} = \frac{B a^2 v}{l} = B v a$

$v = \frac{a}{\Delta t} \Rightarrow \Delta t = \frac{a}{v}$