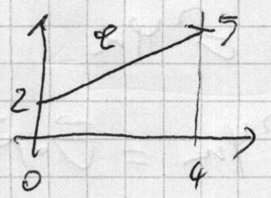
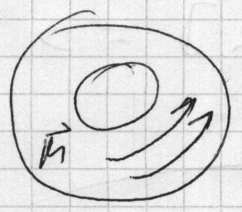
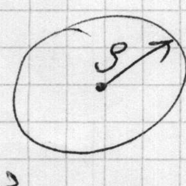
1.) dam. mag. Feldsystem → Poyntingsatz in Integralform

2.)  $\int_{e} g\,ds$ $\quad g = x\,\vec{e}_x - 2y\,\vec{e}_y$

3.)  $\vec{B}$ & $\vec{H}$ innen und außen

Zylinder

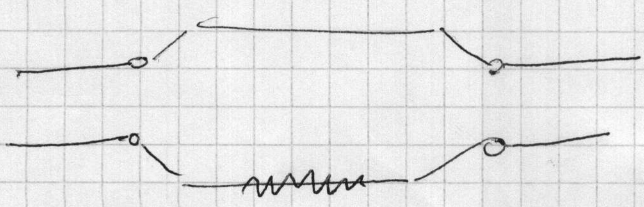
4.)  $\varphi = U\cos(2\alpha)$

ges.: $\varphi \quad 0 < \rho < a$

5.) $\vec{B} = C\,(x^2 - y^2)\,\vec{e}_x - 2Cxy\,\vec{e}_y$ $\quad$ C.. konst.

gesucht $\vec{A}$ in Polarkoordinaten

9.) $\vec{A} = \mathrm{Re}\{\underline{\vec{A}}_0\, e^{j(\omega t - \vec{k}\cdot\vec{r})}\}$ $\quad \vec{E}, \vec{B}$ und Bed. für $\vec{A}_0$

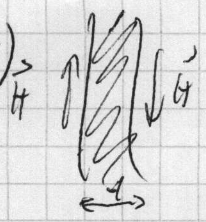
10.) 

6.) $\vec{M}(\vec{r})$ $\quad$ DGL von φ_m

außen $\nabla^2\varphi_m = 0$

innen $\nabla^2\varphi_m = \vec{\nabla}\cdot\vec{M}$

7.) $\vec{\nabla}\times[\vec{\nabla}\times(\vec{v}f)]$ entwickeln

8.)  ges.

P''_{max} bei welchem d $\quad P''(d)_{max}$

Wirbelstromverluste maximal

bei welcher Dicke

$\vec{\nabla} \cdot \vec{B} = 0 \qquad \vec{B} = \mu_0 \vec{H} + \mu_0 \vec{M} \qquad \vec{H} = -\vec{\nabla} \varphi_m$

außen $\vec{M} = \vec{0} \Rightarrow 0 = -\vec{\nabla} \cdot \mu_0 \vec{\nabla} \varphi_m = \nabla^2 \varphi_m$

Innen: $0 = -\nabla^2 \varphi_m + \vec{\nabla} \cdot \vec{M} \Rightarrow \nabla^2 \varphi_m = \vec{\nabla} \cdot \vec{M}$

$\vec{n} \times [\vec{H}] = \vec{K} = 0 \quad \Rightarrow n \times [\nabla \varphi_m] = 0$

$\vec{n} \cdot [\vec{B}] = 0$

$n \cdot [-\vec{\nabla} \varphi] + n \cdot [\vec{M}] = 0$

$[\nabla \varphi_m] = \vec{M}$