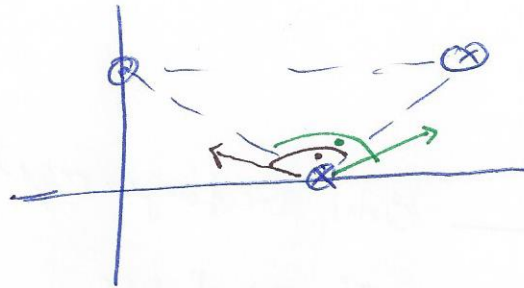
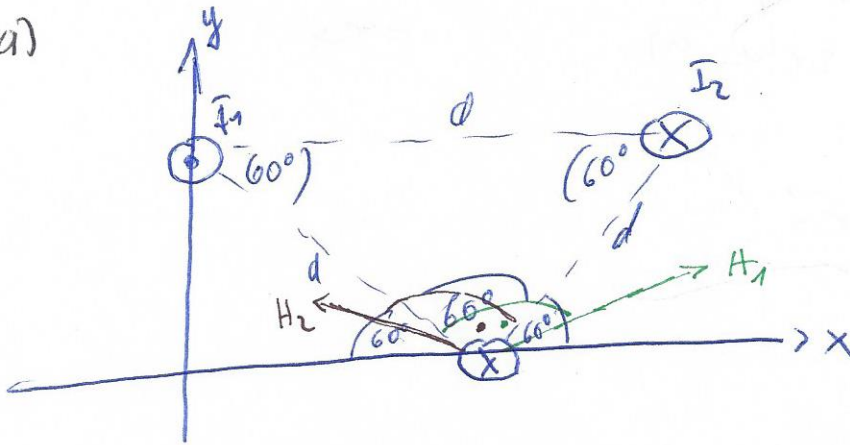


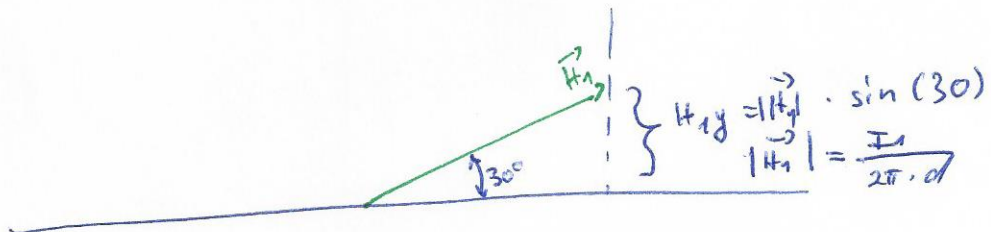
a)



$H_{1x} = -H_{2x}$ heben sich also auf

$$H_{1y} = H_{2y}$$

$$\vec{H} = \vec{H}_1 + \vec{H}_2 = 2 \cdot H_{1y} \cdot \vec{e}_y$$



$$\vec{H} = 2 \cdot \frac{I_1}{2\pi d} \cdot \sin(30^\circ) \vec{e}_y = 53,05 \frac{A}{m} \vec{e}_y$$

b) Lorentzkraft: $\frac{\vec{F}}{l} = I \vec{e}_x \times \vec{B}$

hier: $\frac{\vec{F}_3}{l} = I_3 \cdot (-\vec{e}_z) \times \mu_0 \vec{H}$ aus Teil a)

1m $\rightarrow l$

$\downarrow$ zeigt senkrecht aus der Zeichenebene