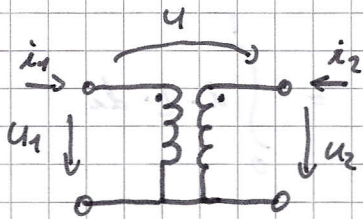


## Reihenschaltung von verkoppelten Spulen

### Beispiel 1



$$u = u_1 - u_2$$

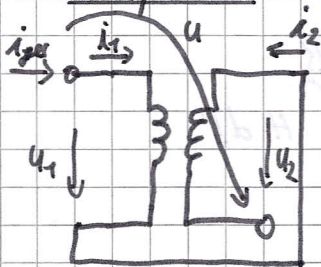
$$i_1 = -i_2 = i$$

$$u = L_{\text{ges}} \cdot \frac{di}{dt}$$

$$= \underbrace{L_1 \frac{di}{dt} - M \frac{di}{dt}}_{u_1} - \underbrace{M \frac{di}{dt} + L_2 \frac{di}{dt}}_{u_2}$$

$$\boxed{L_{\text{ges}} = L_1 - 2M + L_2}$$

### Beispiel 2



$$L_{\text{ges}} = ?$$

$$u = u_1 + u_2$$

$$i = i_1 = i_2$$

$$\boxed{L_{\text{ges}} = L_1 + 2M + L_2}$$