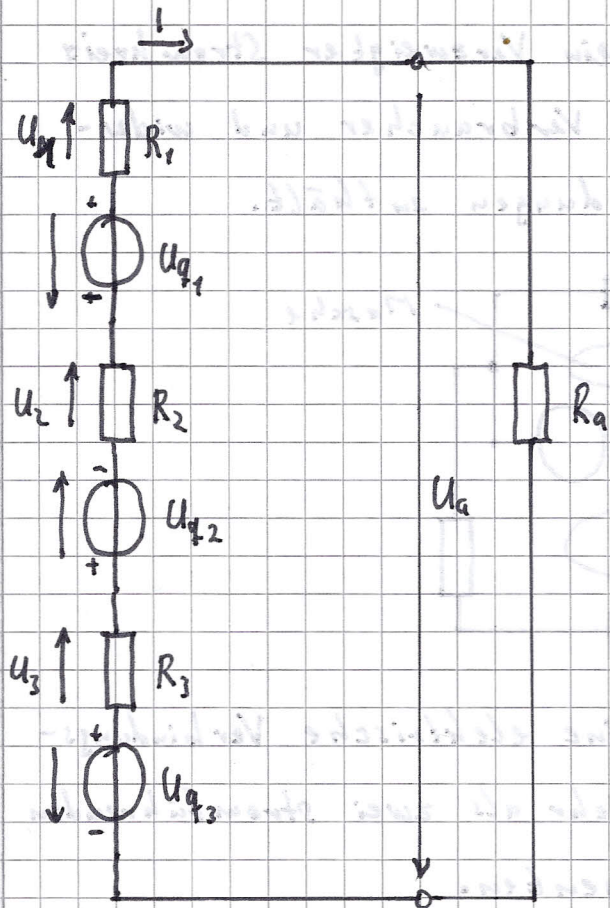
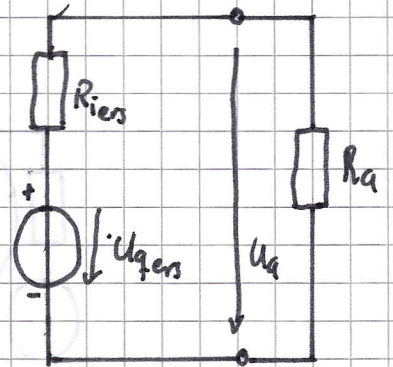


mehrere U-Quellen ein  $R_a$



$\Rightarrow$   
zurückführen  
auf  
Grundstrom-  
kreis



$$U_a = U_{qges} - I \cdot R_{iers}$$

$$U_a = U_{q1} - U_{q2} + U_{q3} - I \cdot R_{iers}$$

$$U_a = U_{q1} - U_{q2} + U_{q3} - I \cdot \sum_{k=1}^n R_{i_k}$$

$$U_{qges} = \sum_{k=1}^n U_{q_k}$$

$$R_{iers} = \sum_{k=1}^n R_{i_k}$$