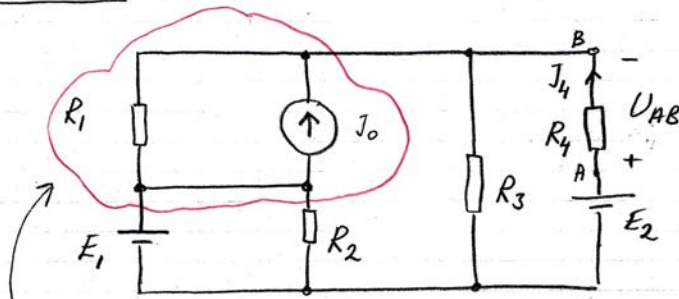
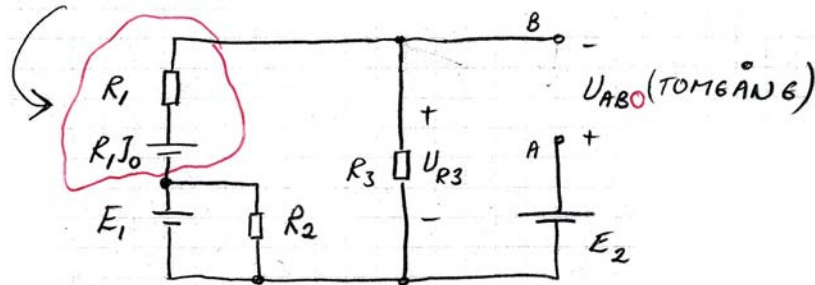


A1.10



TAG BORT  $R_4$  OCH BERÄKNA  $U_{AB}$  (TOMGÅNG).

Nortons teorem



$$U_{ABO}(\text{TOMGÅNG}) = E_2 - U_{R3} \dots (1)$$

$$U_{R3} = (E_1 + R_1 J_0) \cdot \frac{R_3}{R_1 + R_3} \quad \text{INS I (1)} \Rightarrow$$

$$U_{ABO}(\text{TOMGÅNG}) = E_2 - (E_1 + R_1 J_0) \cdot \frac{R_3}{R_1 + R_3}$$

NOLLSTÄLL  $J_0$ ,  $E_1$  &  $E_2$ . BERÄKNA  
TVÄPOLENS INRE RESISTANS  $R_i$ .

$$R_i = R_1 // R_3 = \frac{R_1 R_3}{R_1 + R_3}$$

$$J_4 = \frac{U_{AB} (\text{TOMBANG})}{R_4 + R_i} \Rightarrow$$

$$J_4 = \frac{E_2 - (E_1 + R_1 J_0) \cdot \frac{R_3}{R_1 + R_3}}{R_4 + \frac{R_1 R_3}{R_1 + R_3}} =$$

$$= \frac{(R_1 + R_3) E_2 - E_1 R_3 - R_1 R_3 J_0}{R_1 R_3 + R_1 R_4 + R_3 R_4}$$