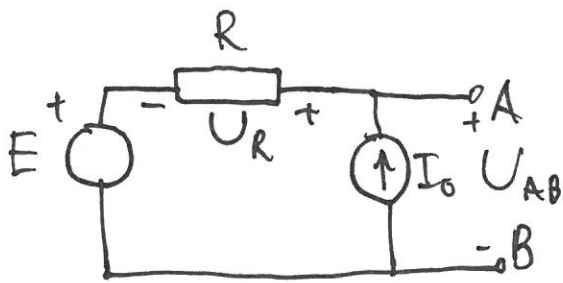


1-43)

a)

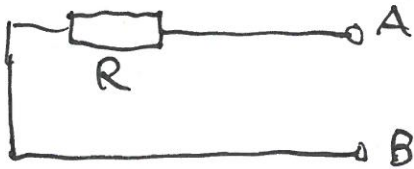


$$U_{AB} = E + U_R = E + R \cdot I_0$$

$$= 8 + 4,7k \cdot 0,5m$$

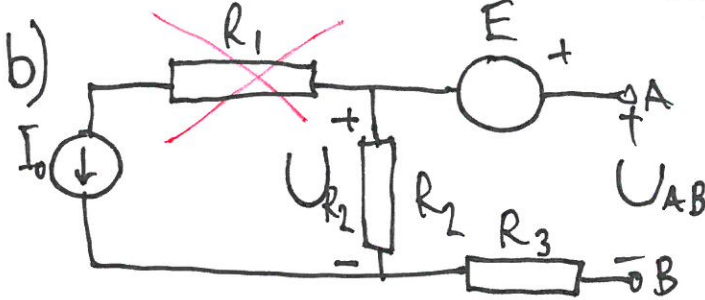
$$= 10,35 \text{ V}$$

Nollställ källor för att bestämma den inre resistansen R_i :



$$R_i = R = 4,7 \text{ k}\Omega$$

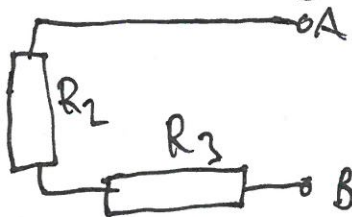
$$I_{AB} = U_{AB} / R_i = 10,35 / 4,7k = 2,20 \text{ mA}$$



$$U_{AB} = E + U_{R_2} = E - R_2 \cdot I_0$$

$$= 6 - 0,3m \cdot 6,8k = 3,96 \text{ V}$$

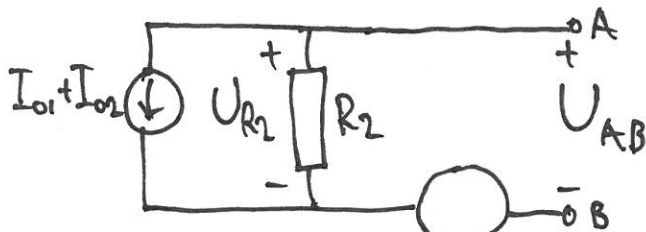
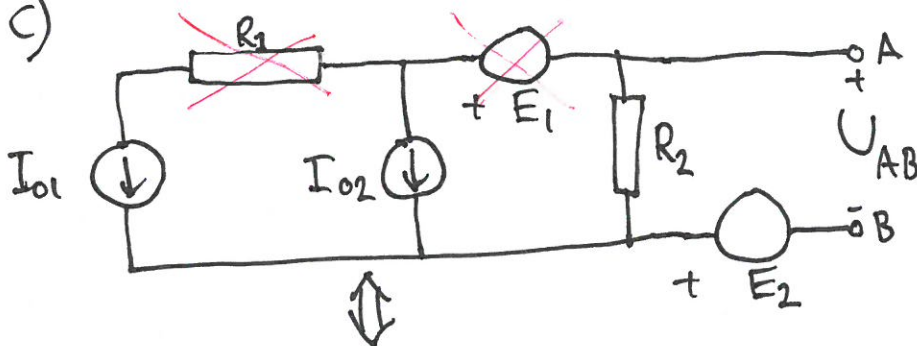
För bestämning av den inre resistansen:



$$R_i = R_2 + R_3 = 6,8k + 560 = 7,36 \text{ k}\Omega$$

$$I_{AB} = U_{AB} / R_i = 3,96 / 7,36k = 0,538 \text{ mA}$$

c)



$$R_i = R_2 = 18 \text{ k}\Omega$$

$$U_{AB} = E_2 + U_{R_2} = E_2 - R_2 \cdot (I_{01} + I_{02})$$

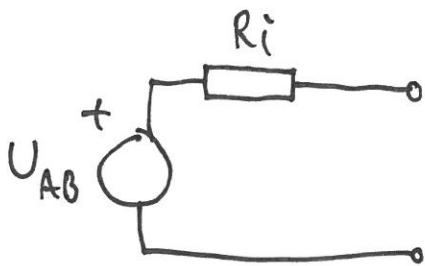
$$= 12 - 18k \cdot (0,4m + 0,1m)$$

$$= 12 - 9 = 3 \text{ V}$$

$$I_{AB} = U_{AB} / R_i = 3 / 18k = 0,167 \text{ mA}$$

I samtliga fall:

Thévenin:



Norton:

