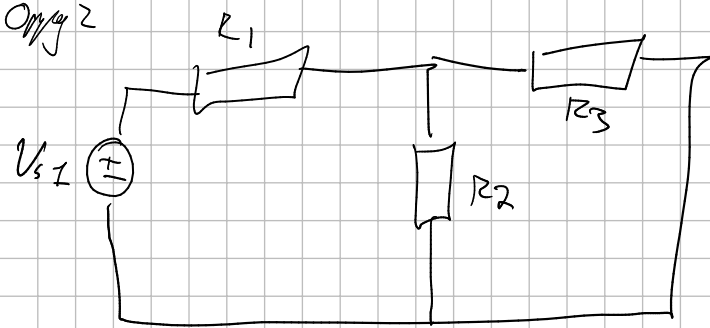


ERT 9
Op/42



$$R_{tot} = R_1 + \left(\frac{1}{R_2} + \frac{1}{R_3} \right)^{-1} = R_1 + \left(\frac{R_2 + R_3}{R_2 R_3} \right)^{-1} = R_1 + \frac{R_2 R_3}{R_2 + R_3}$$

$$R_{tot} - R_1 = \frac{R_2 R_3}{R_2 + R_3}$$

$$(R_{tot} - R_1)(R_2 + R_3) = R_2 R_3$$

$$R_T R_2 + R_T R_3 - R_1 R_2 - R_1 R_3 = R_2 R_3 \quad | \cdot \frac{1}{R_2}$$

$$R_T + \frac{R_T R_3}{R_2} - R_1 - \frac{R_1 R_3}{R_2} = R_3$$

$$R_T - R_1 - R_3 = \frac{R_1 R_3 - R_T R_3}{R_2}$$

$$R_2 = \frac{R_3(R_1 - R_T)}{R_T - R_3 - R_1}$$

$$U = R_1 I \quad I =$$

$$U_2 = R_2 I_2$$

$$U_2 = I_2 \frac{R_3(R_1 - R_T)}{R_T - R_3 - R_1}$$

$$R_2 = \frac{U_2}{I_2}$$

$$U = R_1 I \quad U - U_1 - (U_2 + U_3) = 0$$

$$I = \frac{U}{R_{tot}} \quad U - U_1 - U_2 - U_3 = 0$$

$$U_2 = U - U_1 - U_3$$

$$U_3 = U_2$$

$$U_2 + U_3$$

$$2U_2 = U - U_1$$

$$2U_2 = U - R_1 I$$

$$2U_2 = U - R_1 \frac{U}{R_T}$$

$$U_2 = \frac{U}{2} \left(1 - \frac{R_1}{R_T} \right)$$

$$U = 10V, R_1, R_2, R_3$$

$$1 - i_1 - i_2 - i_3 = 0$$

$$i_3 = 1 - i_1 - i_2$$

$$= \frac{U}{R_{tot}} - \frac{U_1}{R_1}$$

$$= U - R_1 I_1 - R_3 I_3$$

$$= U - R_1 I - R_3 I_3$$

$$= U - R_1 \frac{U}{R_T} -$$

$$R_{\text{tot}} = R_1 + \left(\frac{1}{R_2} + \frac{1}{R_3} \right)^{-1} = R_1 + \left(\frac{R_2 + R_3}{R_2 R_3} \right)^{-1} = R_1 + \frac{R_2 R_3}{R_2 + R_3}$$

$$= \frac{R_1(R_2 + R_3) + R_2 R_3}{R_2 + R_3}$$

$$U_2 = \frac{1}{2} U \left(1 - \frac{R_1}{\frac{R_1(R_2 + R_3) + R_2 R_3}{R_2 + R_3}} \right) = \frac{1}{2} U \left(1 - \frac{R_1(R_2 + R_3)}{R_1(R_2 + R_3) + R_2 R_3} \right)$$

$$U_2 = \frac{1}{2} U \left(1 - \frac{R_1(R_2 + R_3)}{R_1(R_2 + R_3) + R_2 R_3} \right) \quad \text{feil!}$$

$$\underline{\underline{U_2 = U \left(1 - \frac{R_1(R_2 + R_3)}{R_1(R_2 + R_3) + R_2 R_3} \right)}}$$

0/1/3

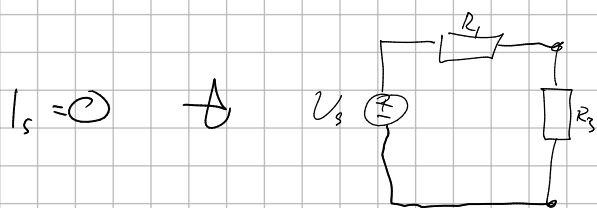
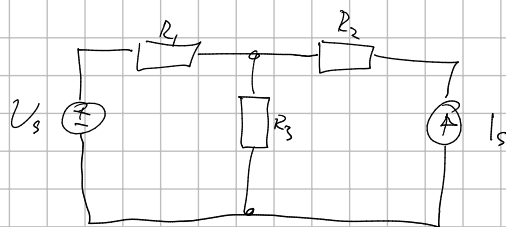
$$U_2 = U \left(1 - \frac{R_1(R_2 + R_3)}{R_1(R_2 + R_3) + R_2 R_3} \right)$$



$$U_2 = U \left(1 - \frac{R_3(R_2 + R_1)}{R_3(R_2 + R_1) + R_1 R_3} \right)$$

Op 6)

$$U_3 = \frac{R_3(U + R_1 I)}{R_1 + R_3}$$



$$U = U_1 + U_3$$

$$U_3 = U - U_1$$

$$U = R_T I \Rightarrow I = \frac{U}{R_T}$$

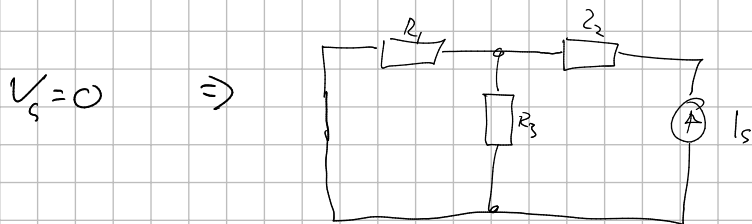
$$U_3 = U - I R_1$$

$$U_3 = U - U \frac{R_1}{R_1 + R_3}$$

$$U_3 = U \left(1 - \frac{R_1}{R_1 + R_3} \right)$$

$$= U \left(\frac{R_1 + R_3 - R_1}{R_1 + R_3} \right)$$

$$\underline{U_3 = U \frac{R_3}{R_1 + R_3}}$$



$$I = I_1 = I_2 = I_3 = I_1 + I_3$$

$$I = I_1 + I_3$$

$$I = U_1 \frac{1}{R_1} + U_3 \frac{1}{R_3}$$

Parallel $\Rightarrow U_1 = U_3$

$$= U_3 \left(\frac{1}{R_1} + \frac{1}{R_3} \right) = U_3 \left(\frac{R_1 + R_3}{R_1 R_3} \right)$$

$$U_3 = I \frac{R_1 R_3}{R_1 + R_3}$$

$$U_3 = J \frac{R_1 R_3}{R_1 + R_3}$$

$$U_3 = U \frac{R_3}{R_1 + R_3}$$

$$U_3 = \frac{U R_3}{R_1 + R_3} + J \frac{R_1 R_3}{R_1 + R_3}$$

$$U_3 = \frac{U R_3 + J R_1 R_3}{R_1 + R_3}$$

$$U_3 = \frac{R_3 (U + J R_1)}{R_1 + R_3}$$

