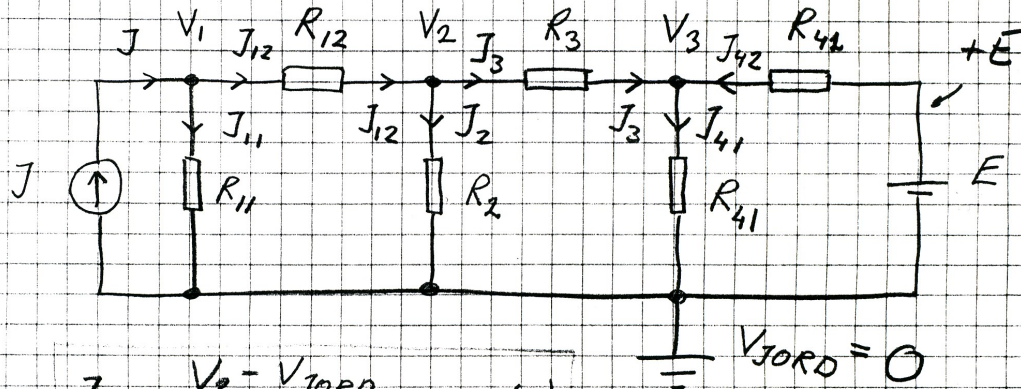


NODANALYS

JORDA EN NOD OCH SÄTT UT STRÖMMAR
OCH POTENTIALBETECKNINGAR I DE ÖVRIGA.



$$J_2 = \frac{V_2 - V_{JORD}}{R_2} \dots (*)$$

$$J = J_{11} + J_{12} \Rightarrow J - J_{11} - J_{12} = 0 \dots (1)$$

$$J_{12} = J_2 + J_3 \Rightarrow J_{12} - J_2 - J_3 = 0 \dots (2)$$

$$J_3 + J_{42} = J_{41} \Rightarrow J_3 + J_{42} - J_{41} = 0 \dots (3)$$

$$J - \frac{V_1 - V_{JORD}}{R_{11}} - \frac{V_1 - V_2}{R_{12}} = 0 \dots (1)$$

$$\frac{V_1 - V_2}{R_{12}} - \frac{V_2 - V_{JORD}}{R_2} - \frac{V_2 - V_3}{R_3} = 0 \dots (2)$$

$$\frac{V_2 - V_3}{R_3} + \frac{E - V_3}{R_{42}} - \frac{V_3 - V_{JORD}}{R_{41}} = 0 \dots (3)$$

$$2 - \frac{V_1 - 0}{4} - \frac{V_1 - V_2}{4} = 0 \dots (1)$$

$$\frac{V_1 - V_2}{4} - \frac{V_2 - 0}{8} - \frac{V_2 - V_3}{7} = 0 \dots (2)$$

$$\frac{V_2 - V_3}{7} + \frac{8 - V_3}{2} - \frac{V_3 - 0}{2} = 0 \dots (3)$$

$$\left(\begin{array}{ccc|c} -2 & 1 & 0 & -8 \\ 14 & -29 & 8 & 0 \\ 0 & 2 & -16 & -56 \end{array} \right) \sim \left| \text{EKV 2} + 7 \cdot \text{EKV 1} \right| \sim$$

$V_1 \quad V_2 \quad V_3$

$$\sim \left(\begin{array}{ccc|c} -2 & 1 & 0 & -8 \\ 0 & -22 & 8 & -56 \\ 0 & 2 & -16 & -56 \end{array} \right) \sim \left| 11 \cdot \text{EKV 3} + \text{EKV 2} \right| \sim$$

$$\sim \left(\begin{array}{ccc|c} -2 & 1 & 0 & -8 \\ 0 & -22 & 8 & -56 \\ 0 & 0 & -168 & -672 \end{array} \right)$$

$$\text{EKV 3} \Rightarrow V_3 = \frac{-672}{-168} = +4,0 \text{ V}$$

$$\text{INS } | \text{ EKV 2} \Rightarrow -22V_2 + 8 \cdot 4,0 = -56$$

$$\Rightarrow V_2 = +4,0 \text{ V} \quad \text{INS } | \text{ EKV 1} \Rightarrow$$

$$-2V_1 + 4,0 = -8 \Rightarrow V_1 = +6,0 \text{ V}$$

$$\text{INS } | (*) \Rightarrow J_2 = \frac{4,0 - 0}{8,0} = 0,50 \text{ A}$$