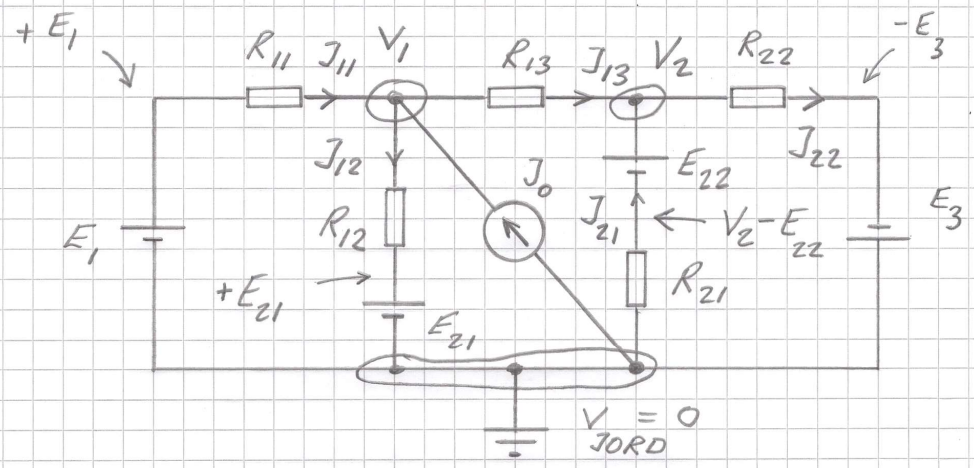
A1.17 NODANALYS



NOD 1: $J_{11} - J_{12} + J_0 - J_{13} = 0 \quad \ldots(1)$

NOD 2: $J_{13} + J_{21} - J_{22} = 0 \quad \ldots(2)$

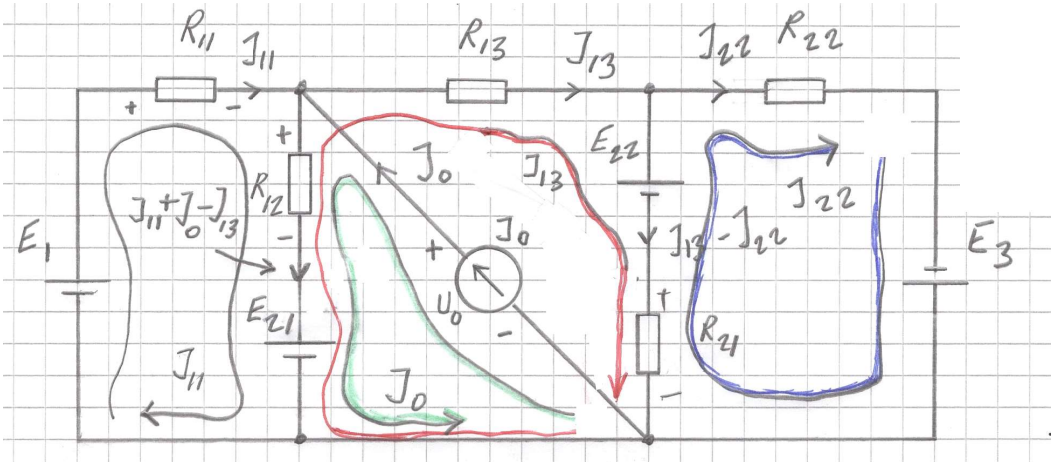
NOD 1: $$\frac{E_1 - V_1}{R_{11}} - \frac{V_1 - E_{21}}{R_{12}} + J_0 - \frac{V_1 - V_2}{R_{13}} = 0 \quad \ldots(1)$$

NOD 2: $$\frac{V_1 - V_2}{R_{13}} + \frac{V_{JORD} - (V_2 - E_{22})}{R_{21}} - \frac{V_2 - (-E_3)}{R_{22}} = 0 \quad \ldots(2)$$

$V_1 = +2{,}0\ V \qquad V_2 = 0$

$$J_{13} = \frac{V_1 - V_2}{R_{13}} \rightarrow J_{13} = 2{,}0\ A$$

Alternativ lösning med användande av slinganalys.



$$+E_1 - R_{11}J_{11} - R_{12}(J_{11} + J_0 - J_{13}) - E_{21} = 0$$

$$+E_{21} + R_{12}(J_{11} + J_0 - J_{13}) - R_{13}J_{13} - E_{22} - R_{21}(J_{13} - J_{22}) = 0$$

$$+U_0 - R_{12}(J_{11} + J_0 - J_{13}) - E_{21} = 0$$

$$+E_3 + R_{21}(J_{13} - J_{22}) + E_{22} - R_{22}J_{22} = 0$$

4 EKVATIONER OCH 4 OBEKANTA:

J_{11}, J_{13}, J_{22} OCH U_0

(OBS! SPÄNNINGEN U_0 GENERERAS AV STRÖMGENERATORN J_0)

$J_{11} = \ldots$ $J_{13} = 2{,}0\,A$ $J_{22} = \ldots$ $U_0 = \ldots$