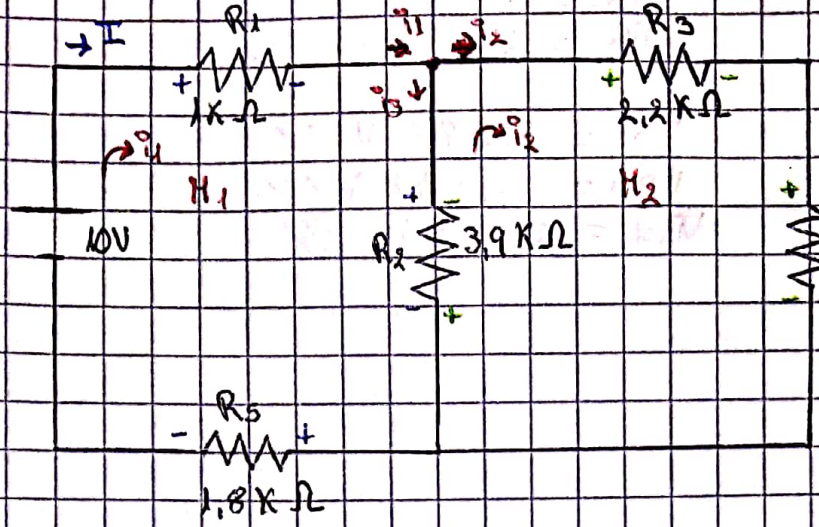

LVK

$\sum V_M = 0$

M1: $10 - 1K\,i_1 - 3,9K(i_1 - i_2) - 1,8K\,i_1 = 0$

$10 - 6,7\,i_1 + 3,9\,i_2 = 0$ ①

M2: $-2,2\,i_2 - 2,2\,i_2 - 3,9(i_2 - i_1) = 0$

$8,3\,i_2 = 3,9\,i_1$

$i_2 = \frac{3,9\,i_1}{8,3}$ ②

$10 - 6,7\,i_1 + 3,9\,i_2 = 0$

$10 - 6,7\,i_1 + 3,9\left(\frac{3,9\,i_1}{8,3}\right) = 0$

$10 = 4,87\,i_1$

$i_1 = 2,054\ mA$ ///

$i_2 = \frac{3,9\,(2,054)}{8,3}$

$i_2 = 0,965\ mA$ ///

LCK

$\sum i_n = 0$

$i_1 = i_2 + i_3$

$2,059 = 0,965 + i_3$

$i_3 = 1,089\ mA$ ///

$V = I\,R$

$V_{R1} = 2,054\ mA \cdot 1K\,\Omega$

$V_{R1} = 2,054\ V$ ///

$V_{R5} = 2,054\ mA \cdot 1,8K\,\Omega$

$V_{R5} = 3,697\ V$ ///

$V_{R2} = 1,089\ mA \cdot 3,9K\,\Omega$

$V_{R2} = 4,247\ V$ ///

$V_{R3} = V_{R4} \rightarrow R_3 = R_4$

$V_{R3-R4} = 0,965\ mA \cdot 2,2K\,\Omega$

$V_{R3-R4} = 2,123\ V$ ///

$10 - 1I - 2,2I - 2,2I - 1,8I = 0$

$10 - 7,2I = 0$

$I = 1,389\ mA$ ///

$V_{R1} = 1,389\ mA \cdot 1K\,\Omega$

$V_{R1} = 1,389\ V$ ///

$V_{R3} = V_{R4} = 2,2K\,\Omega \cdot 1,389\ mA$

$V_{R3} = V_{R4} = 3,0558$

$V_{R5} = 1,389\ mA \cdot 1,8K\,\Omega$

$V_{R5} = 2,5\ V$

$10 - 1K I_1 - 3{,}9 I_1 K - 1{,}8 I_1 K = 0$

$I_1 = 1{,}493 \text{ mA}$

$10 - 2(2{,}2) K I_2 - 3{,}9 I_2 K = 0$

$I_2 = 1{,}205 \text{ mA}$

$V_{R1} = 1{,}493 \text{ V}$ ///

$V_{R2} = 5{,}823 \text{ V}$ ///

$V_{R3} = 2{,}684 \text{ V}$ ///

$V_{R2} = 4{,}698 \text{ V}$ ///

$V_{R3} = 2{,}651 \text{ V}$ ///

$V_{R4} = 2{,}651 \text{ V}$ ///