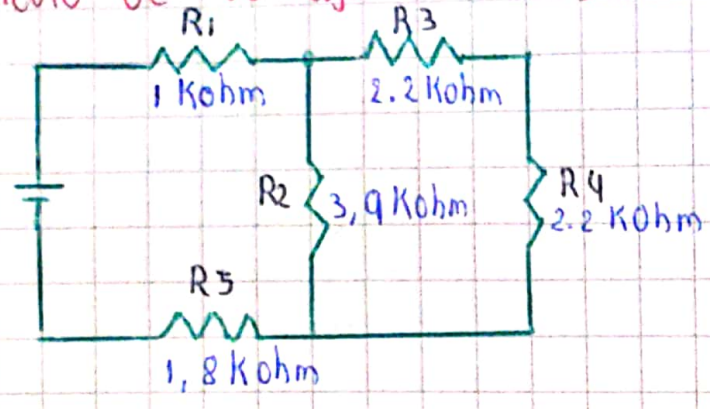
Cálculo de voltaje e intensidad



$Re_1 = 4,4\ K\Omega$

$\frac{1}{Re_2} = \frac{1}{4,4} + \frac{1}{3,9} \Rightarrow 2,067\ K\Omega$

$RT = 1\,Kohm + 2,067\,Kohm + 1,8\,Kohm = 4,867\ K\Omega$

$V = i \cdot RT \Rightarrow i = \frac{V}{RT} \Rightarrow \frac{10}{4867} \Rightarrow 2,05\,mA$

$V_1 = I \cdot R_1 \Rightarrow 2,05mA \cdot 1\,Kohm = 2,05\,V_{//}$

$V_5 = I \cdot R_5 \Rightarrow 2,05mA \cdot 1,8\,Kohm \Rightarrow 3,67\,V_{//}$

$i_1 = \frac{V_1}{R_1} = \frac{2,05V}{1K\Omega} = 2,05mA_{//}$

$i_2 = \frac{V_2}{R_2} = \frac{4,24V}{3,9K\Omega} = 1,09mA_{//}$

$i_3 = \frac{V_3}{R_3} = \frac{2,12V}{2,2K\Omega} = 0,964mA_{//}$

$V_{Re_2} = I \cdot Re_2 \Rightarrow 2,05\,mA \cdot 2,067K\Omega = 4,24V$

$V_2 = 4,24\,V_{//}$

$V_3 = V_4 = \frac{V_2}{2}$ Ya que estan en serie

$V_3 = 2,12\,V_{//}$ $V_1 + V_2 + V_3 + V_4 + V_5 = 10V$

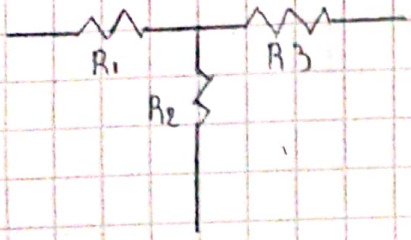
$V_4 = 2,12\,V_{//}$

$i_4 = \frac{V_4}{R_4} = \frac{2,12V}{2,2K\Omega} = 0,964mA_{//}$

$i_5 = \frac{V_5}{R_5} = \frac{3,67V}{1,8K\Omega} = 2,05mA_{//}$

Ley de Kirchhoff corrientes

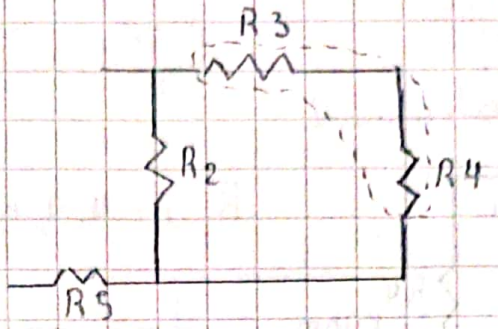
Nodo 1



$I_{R1} = I_{R2} + I_{R3}$

$I_{R1} = 1,09mA + 0,964mA$

$2,05mA \approx 2,054mA$

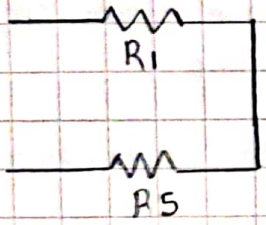


$I_{R2} + I_{R3} + I_{R4} = I_{R5}$

$1,09mA + 0,964 = 2,05mA$

$2,054mA \approx 2,05mA$

Nodo 3



$I_{R1} - I_{R5} = 0$

$2,05mA - 2,05mA = 0$

$0 = 0$