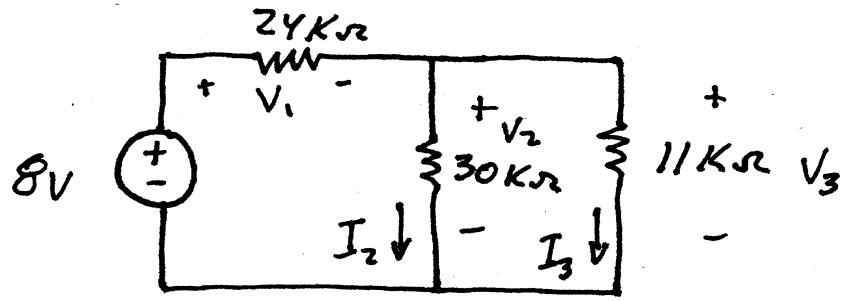
GIVEN:



FIND: V_1, V_2, V_3, I_2, I_3 USING VOLT/CURRENT DIVISION

SOLN: NOTICE $R_2 // R_3$ $\therefore R_{eq} = \frac{30(11)}{30+11} = 8050\,\Omega$

AND $V_2 = V_3$ ...

BY VOLT DIVISION:

$$V_1 = 8\left(\frac{24K}{24K + 8050}\right) = \underline{\underline{6\ V}}$$

$$V_2 = V_3 = 8\left(\frac{8050}{24K + 8050}\right) = \underline{\underline{2\ V}}$$

NOTICE $I_1 = \frac{V_1}{R_1} = \frac{6}{24} = 250\,\mu A$ WILL DIVIDE INTO I_2 & I_3

BY CURRENT DIVISION:

$$I_2 = 250\left(\frac{11}{11+30}\right) = \underline{\underline{67\ \mu A}}$$

$$I_3 = 250\left(\frac{30}{11+30}\right) = \underline{\underline{183\ \mu A}}$$

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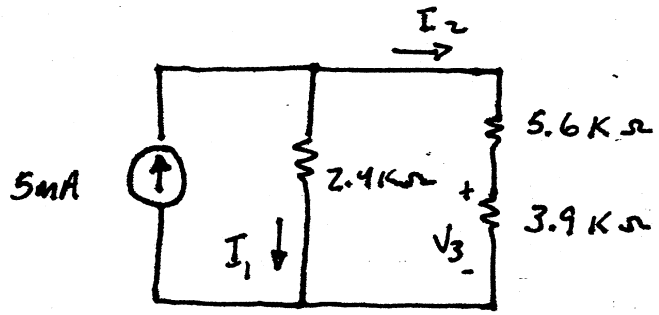
GIVEN:



FIND: I_1, I_2, V_3 USING CURRENT/VOLT DIVISION

SOLN:

$$I_1 = 5\left(\frac{9.5}{11.9}\right) = \underline{\underline{4\,mA}}$$

$$I_2 = 5\left(\frac{2.4}{11.9}\right) = \underline{\underline{1\,mA}}$$

$$V_3 = 4(2.4)\left(\frac{3.9}{9.5}\right) = \underline{\underline{3.9\,V}}$$

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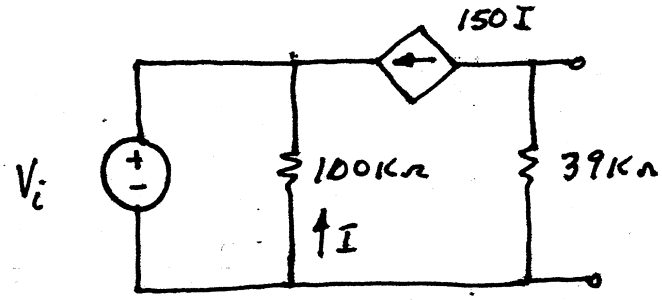
GIVEN:



FIND: THEVENIN EQ. CIRCUIT

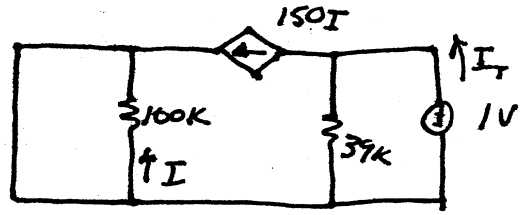
SOLN: FIND V_{OC} ...

NOTICE $V_{oc} = -150 I (39K)$

AND $I = -\frac{V_i}{100K}$

SO $V_{oc} = \underline{\underline{58.5\ V_i}}$

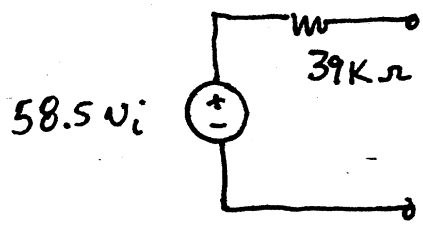
FIND R_{TH} ...



$R_{TH} = \frac{1V}{I_T}$ ... BUT NOTICE $I = 0$ ... SO $150I = 0$

AND $I_T = \frac{1}{39K} = 25.6\ \mu A$

SO $R_{TH} = \frac{1}{I_T} = \underline{\underline{39K\Omega}}$



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