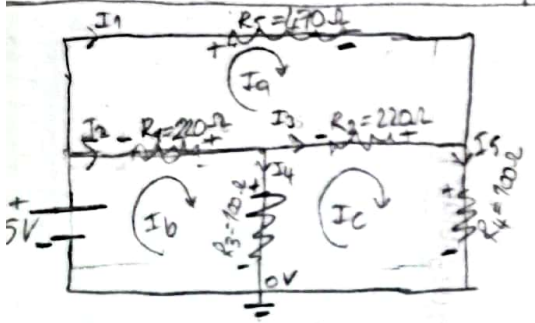
Burak ATALAY 22011641

Hesaplar



① $470 \cdot I_a + 220 \cdot (I_a - I_c) + 220 \cdot (I_a - I_b) = 0$

② $-5 - 220 \cdot (I_a - I_b) + 100 (I_b - I_c) = 0$

③ $-100 \cdot (I_b - I_c) - 220 \cdot (I_a - I_c) + 100 I_c = 0$

① $910 I_a - 220 I_b - 220 I_c = 0$

② $-220 I_a + 320 I_b - 100 I_c = 5$

③ $-220 I_a - 100 I_b + 420 I_c = 0$

* Matlab yardımıyla bu matrisi çözünce;

$I_a = 0{,}0084\ A = 8.4\ mA$

$I_b = 0{,}0246\ A = 24.6\ mA$

$I_c = 0{,}0103\ A = 10.3\ mA$

sonuçları çıktı

$I_1 = I_a = 8.4\ mA$

$I_2 = I_b - I_a = 16.2\ mA$

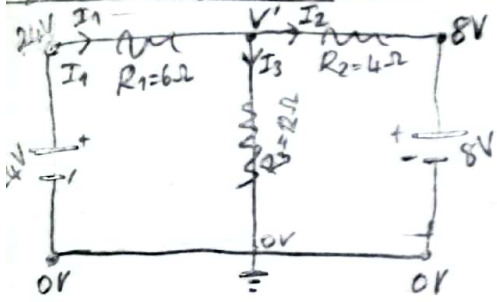
$I_3 = I_c - I_a = 1.9\ mA$

$I_4 = I_b - I_c = 14.3\ mA$

$I_5 = I_c = 10.3\ mA$

Ölçümler

I_1 (mA)	I_2 (mA)	I_3 (mA)	I_4 (mA)	I_5 (mA)
8.45	16.2	1.85	14.4	10.3



$I_1 = I_2 + I_3$

$\frac{24 - V'}{6} = \frac{V' - 8}{4} + \frac{V'}{12}$

$\frac{48 - 2V'}{12} = \frac{3V' - 24 + V'}{12}$

$6V' = 72\ V \rightarrow V' = 12\ V$

$I_1 = \frac{24 - 12}{6} = 2\ A$

$I_2 = \frac{12 - 8}{4} = 1\ A$

$I_3 = \frac{12}{12} = 1\ A$

I_1 (A)	I_2 (A)	I_3 (A)
2	1	1