

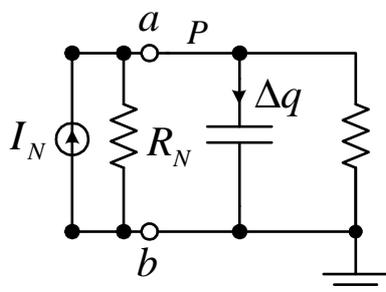
REŠENJA

1. a) $I_N=6\text{mA}$, $R_N=1\text{k}\Omega$.

b) $22\mu\text{m}$.

c) Pre zatvaranja prekidača napon na kondenzatoru je bio 0 koliko je bilo i naelektrisanje.

Nakon zatvaranja prekidača formira se kolo:

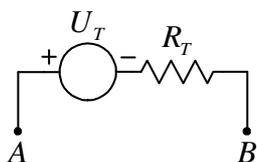


Tada je $\Delta U=3\text{V} \Rightarrow \Delta q=3\text{nC}$.

d) C se smanjilo duplo \Rightarrow duplo se smanjilo $q \Rightarrow$ isteklo je 1.5nC , $k=1/2$.

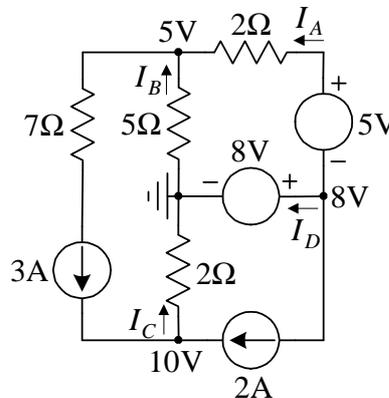
2. a) $R_{EKV} = R_1 + (\beta + 1)R_2$.

b) $U_T = 3\text{V}$, $R_T = 3\Omega$.



c) $i_x(t) = 1\text{A} - 2\text{A} \cdot \sin(\omega t)$.

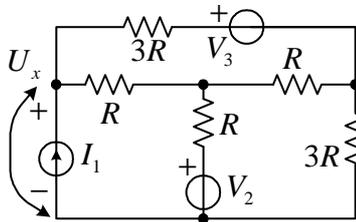
3. a) Traženi potencijali su prikazani na sledećoj slici:



b) $I_A = 4\text{A}$, $I_B = -1\text{A}$, $I_C = 5\text{A}$, $I_D = -6\text{A}$, $P_{3\text{A}} = 78\text{W}$, $P_{2\text{A}} = 4\text{W}$, $P_{5\text{V}} = 20\text{W}$, $P_{8\text{V}} = 48\text{W}$, $P_{7\Omega} = 63\text{W}$.

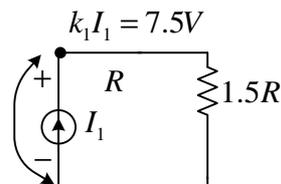
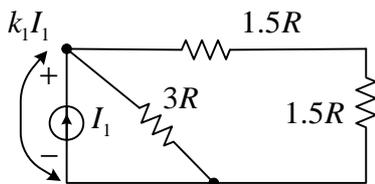
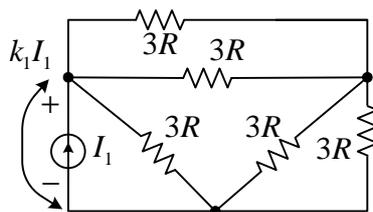
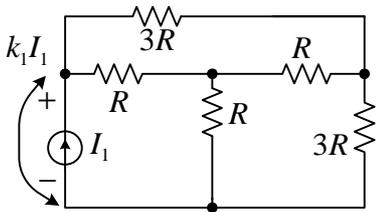
4. $U_x = 13.75V$

5.



$$U_x = k_1 I_1 + k_2 V_2 + k_3 V_3$$

$$\left. \begin{aligned} -1.25 &= -2k_2 + k_3 \\ +2.00 &= 2k_2 + 2k_3 \end{aligned} \right\} 3k_3 = 0.75 \Rightarrow k_3 = 0.25 \Rightarrow k_2 = 0.75$$



$$U_x = 7.5V + 0.75 \cdot 5V + 0.25 \cdot 10V = 13.75V$$