



DATI

$$R_1 = 20$$

$$i_0 = 1 \text{ A}$$

$$R_2 = 40$$

$$R_3 = 30$$

$$R_4 = 30$$

$$\alpha = 1.5 \text{ S}$$

$$R_{eq} = ?$$

$$\text{LKC}_C: \begin{cases} -i_0 + i_2 + i_1 = 0 \\ i_1 = \alpha V_2 \\ -V_2 - V_3 + V_0 - V_4 = 0 \end{cases} = 0 \Rightarrow \begin{cases} 1.5 V_2 + V_2 G_2 - 1 = 0 \\ i_1 = \alpha V_2 \\ V_0 = R_3 i_0 + R_4 i_4 + V_2 \end{cases}$$

$$V_2 (1.5 + 0.025) = 1 \Rightarrow V_2 = \underline{0.66 \text{ V}} \quad V_2$$

$$\Rightarrow i_4 = 1.5 \cdot 0.66 = \underline{0.98 \text{ A}} \quad i_1$$

$$\Rightarrow V_0 = 0.66 + 30 + 30 = \underline{60.66 \text{ V}}$$

Ans

$$\Rightarrow V_0 = R_{eq} \cdot i_0 \Rightarrow R_{eq} = \frac{V_0}{i_0} = \underline{60.66 \, \Omega}$$