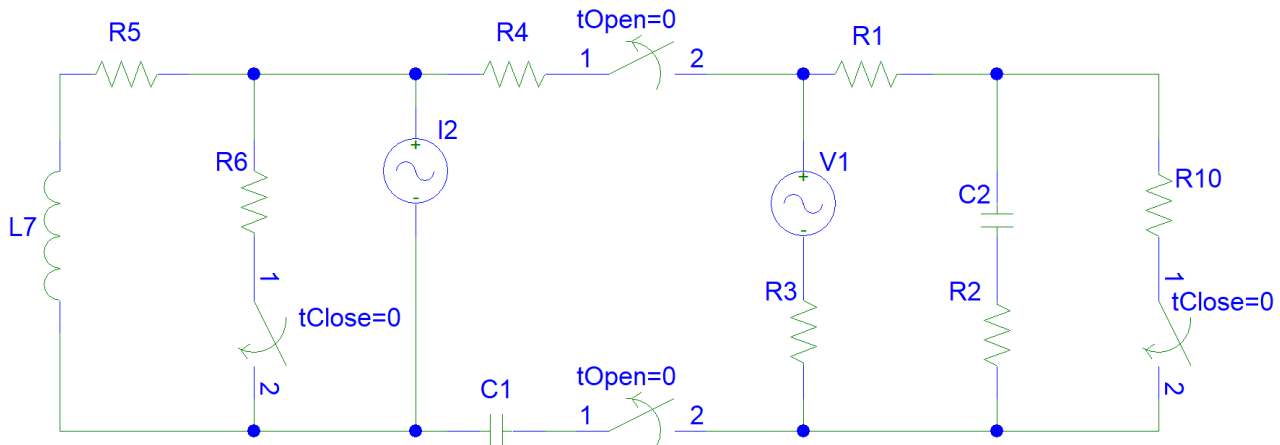


Esercizio 1: Circuito dinamico



$$v_1(t) = \begin{cases} 4\sqrt{2} \sin\left(10t + \frac{\pi}{4}\right) V, & t < 0 \text{ s} \\ 5\sqrt{2} \sin\left(10t + \frac{\pi}{6}\right) V, & t \geq 0 \text{ s} \end{cases} \quad i_2(t) = \begin{cases} 5 \cos\left(10t - \frac{\pi}{4}\right) A, & t < 0 \text{ s} \\ 6 \cos\left(10t - \frac{\pi}{6}\right) A, & t \geq 0 \text{ s} \end{cases}$$

$$R_1 = R_2 = R_3 = R_4 = R_5 = R_6 = R_{10} = 1 \, \Omega \quad C_1 = C_2 = 1 \, F \quad L_7 = 1 \, H$$

- 1) Risolvere il circuito dinamico, calcolando $i_{L7}(t)$ e $v_{C2}(t)$ e graficandole.
 - a. Risolvere il regime pre-transitorio mediante il metodo delle **correnti di maglia** e verificare il teorema di **Boucherot**.

Note:	A	B
	C	D
	Insuff	

$$\begin{array}{lll} \dot{Z}a = 3 - 1i \, \Omega & \dot{Z}b = 1 + 2i \, \Omega & \dot{Z}13 = 3 - 2i \, \Omega \\ f = 50 \, \text{Hz} & \cos \varphi_{des} = 0.9 & \end{array}$$

The circuit diagram for problem 1 consists of the following components and connections:

- A voltage source P'_1 is connected to the top of the circuit.
- A 1Ω resistor (R_1) is connected in series with the positive terminal of P'_1 .
- After R_1 , the circuit splits into two parallel branches:
 - Branch 1: A 1Ω resistor (R_2) in series with a 2Ω resistor (R_3).
 - Branch 2: A 2Ω resistor (R_5).
- Both branches recombine, and the circuit continues through a 1Ω resistor (R_4) connected in series with the negative terminal of P'_1 .
- The output terminals are labeled P'_2 .

- Determina la rappresentazione base tensione del doppio bipolo.
- Effettuare la sintesi a pi-greco.

Note:

A	B
C	D
Insuff	