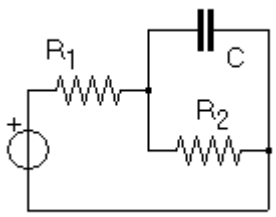
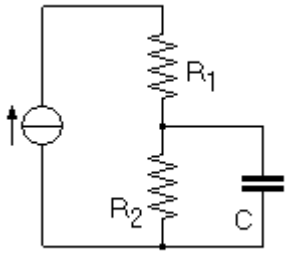
Esercizio 6.1)

Determinare la costante di tempo dei circuiti in figura.
a)



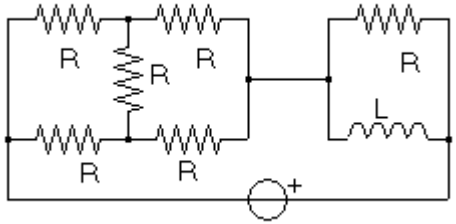
[$\tau = C R_1 R_2 /(R_1 + R_2)$]

b)



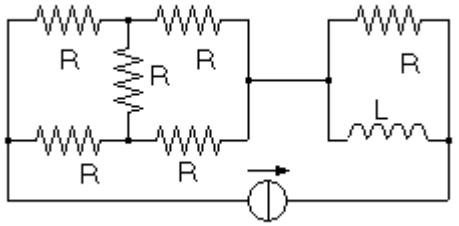
[$\tau = C R_2$]

c)



[$\tau = 2 L / R$]

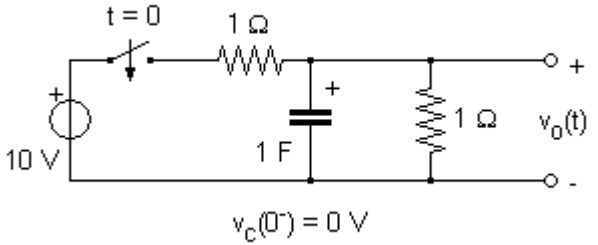
d)



[$\tau = L / R$]

Esercizio 6.2)

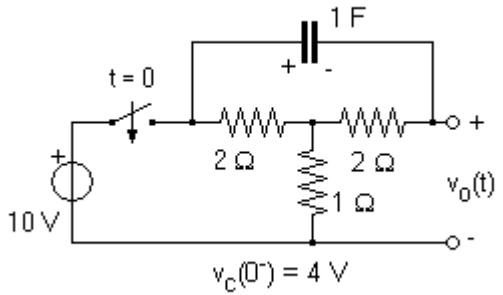
Determinare $v_o(t)$.



[$v_o(t) = 5 (1 – e^{-2 t})$]

Esercizio 6.3)

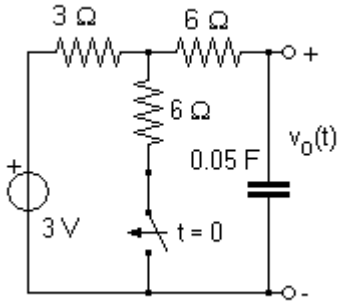
Determinare $v_o(t)$.



[$v_o(t) = (10/3) + (8/3)\, e^{-3\,t/8}$)]

Esercizio 6.4)

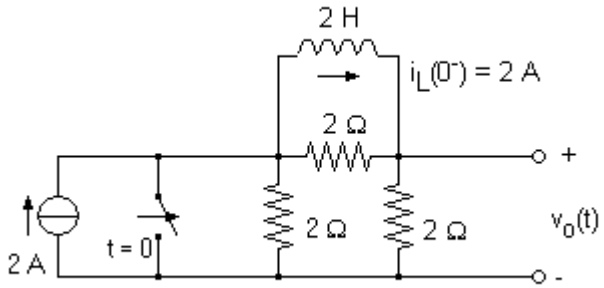
Il circuito in figura è a regime prima della chiusura dell'interruttore. Determinare l'espressione di $v_o(t)$ per $t > 0$.



[$v_o(t) = 2 + e^{-2.5\,t}$]

Esercizio 6.5)

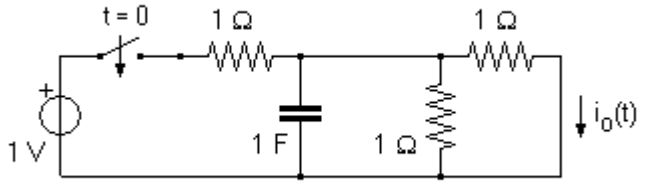
Determinare $v_o(t)$.



[$v_o(t) = (2/3)\, e^{-2\,t/3} + 2$]

Esercizio 6.6)

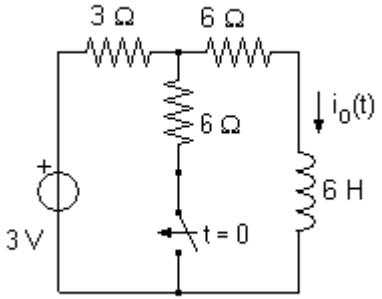
Determinare $i_o(t)$, considerando condizioni iniziali nulle per il condensatore.



[$i_o(t) = (1/3)(1 - e^{-3\,t})$]

Esercizio 6.7)

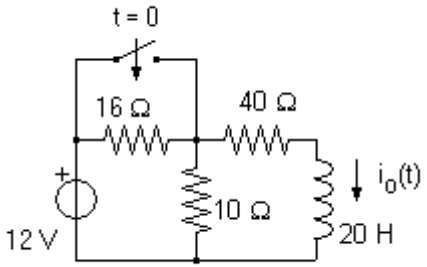
Il circuito in figura è a regime prima della chiusura dell'interruttore.
Determinare $i_o(t)$ per t > 0.



[$i_o(t) = 0.25 + (1/12)\, e^{-1.33\,t}$]

Esercizio 6.8)

Il circuito in figura è a regime prima della chiusura dell'interruttore.
Determinare $i_o(t)$ per t > 0.



[$i_o(t) = 0.3 - 0.2\, e^{-2\,t}$]
