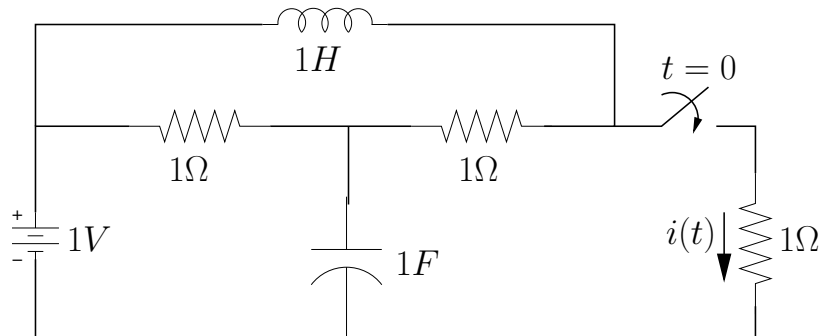


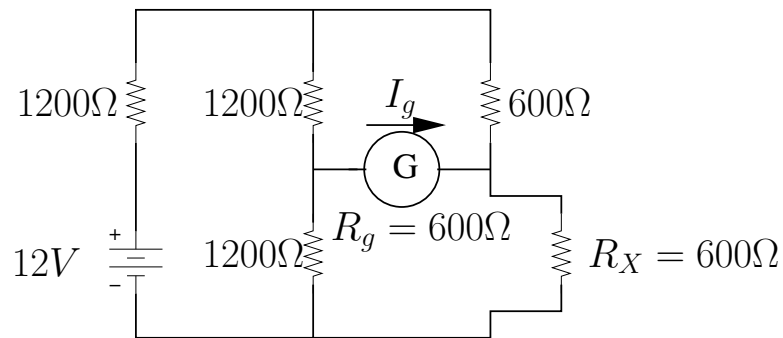
EC204: Networks & Systems

Problem Set 9

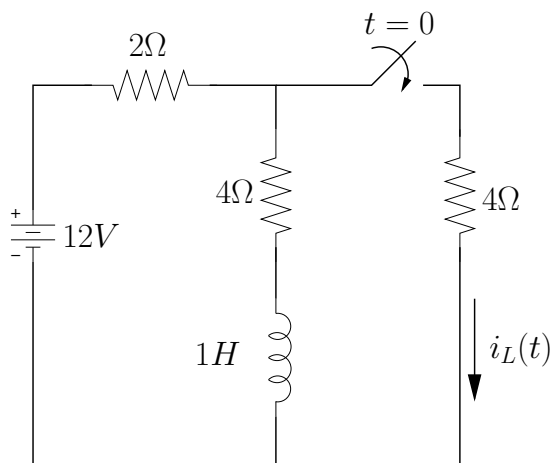
- Find $i(t)$ for $t \geq 0$ using (a) Thevenin's theorem, and (b) substitution and superposition theorems.



- The galvanometer current I_g is zero if $R_X = 600\Omega$. If R_X varies between 570Ω and 630Ω , then find the corresponding range for I_g using compensation theorem.



3. Find $i_L(t)$ for $t \geq 0$ using compensation theorem. (Consider the original network to be the network without the inductor.)



4. The solution for the port currents in case (i) is given below.

- (a) Determine i in the network in case (ii).
 (b) Assuming $z_{11} = z_{22}$, determine the z -parameters of the linear resistive network N .

