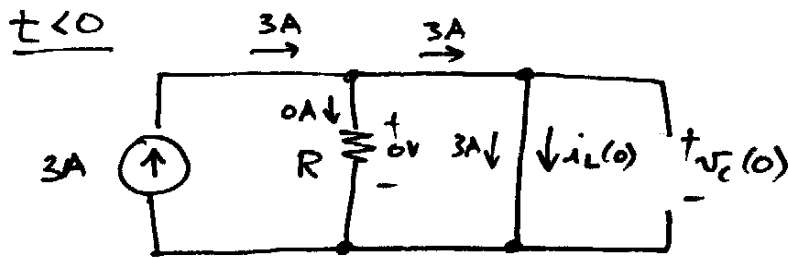
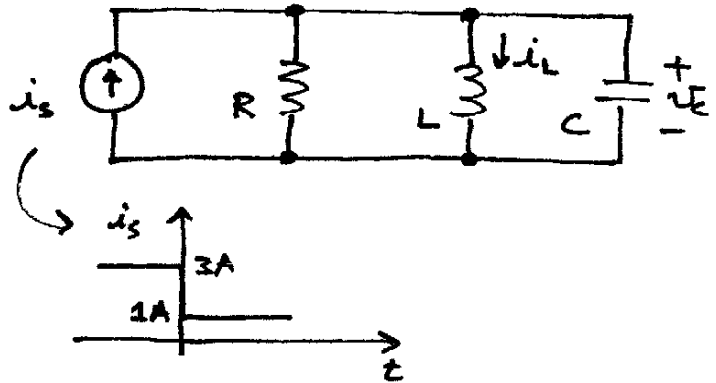


① Find the initial conditions:

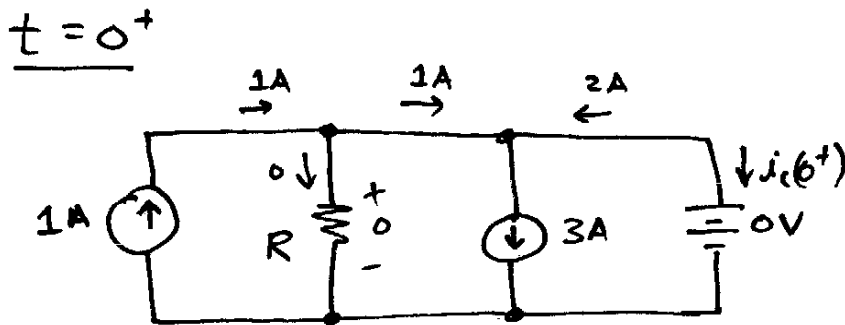
$$v_c(0) = ?$$

$$\frac{dv_c(0)}{dt} = ?$$



$$i_L(0) = 3A$$

$$v_c(0) = 0V$$

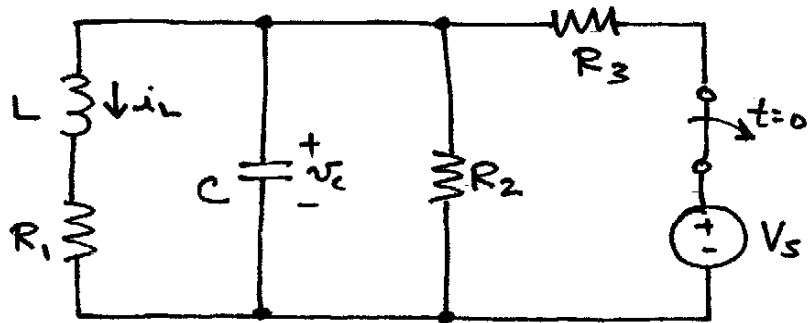


$$i_c(0)^+ = -2A = C \frac{dv_c(0^+)}{dt}$$

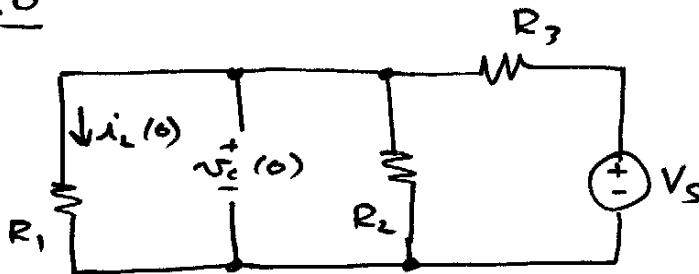
$$\Rightarrow \frac{dv_c(0^+)}{dt} = -\frac{2}{C} \text{ V/s}$$



② Convert this circuit to the s-domain:



t < 0



$$v_C(0) = \frac{R_1 \parallel R_2}{R_1 \parallel R_2 + R_3} V_S$$

$$i_L(0) = \frac{v_C(0)}{R_1}$$

s-domain

