	Dipôle RC	Dipôle RL	Dipôle RLC
Formules	$q = C \times u_C$ $\quad i = C\frac{du_C}{dt}$ Bobine idéale $u_L = L\frac{di}{dt}$ Bobine réelle $u_L = L\frac{di}{dt} + ri$		
Eq Diff	$E = RC\frac{du_C}{dt} + u_C \Rightarrow u_C(t) = A + Be^{-\frac{t}{\tau}}$	$E = L\frac{di}{dt} + R_{eq}i \Rightarrow i(t) = A + Be^{-\frac{t}{\tau}}$	$\ddot{u}_C + \frac{1}{LC}u_C = 0 \Rightarrow u_C(t) = u_0\cos\left(\frac{2\pi}{T_0}t + \phi_0\right)$
Charge	$A = E, B = -E, \tau = RC$ $u_C(t) = E\left(1 - e^{-\frac{t}{\tau}}\right)$	$A = I_0, B = -I_0, \tau = \frac{L}{R_{eq}}, I_0 = \frac{E}{R_{eq}}$ $i(t) = I_0\left(1 - e^{-\frac{t}{\tau}}\right)$	$u_0 = E, \phi_0 = 0, T_0 = 2\pi\sqrt{LC}$ $u_C(t) = E\cos\left(\frac{2\pi}{T_0}t\right)$
Décharge	$A = 0, B = E, \tau = RC$ $u_C(t) = Ee^{-\frac{t}{\tau}}$ et $i(t) < 0$	$A = 0, B = I_0, \tau = \frac{L}{R_{eq}}, I_0 = \frac{E}{R_{eq}}$ $i(t) = I_0e^{-\frac{t}{\tau}}$	Circuit RLC : $\ddot{u}_C + \frac{r+R}{L}\dot{u}_C + \frac{1}{LC}u_C = 0$
On peut utiliser	$i(t) = C\frac{du_C}{dt}$ $u_R(t) = Ri$	$u_R(t) = Ri$ $u_L(t) = E - u_R$	$u_C = \frac{q}{C} \Rightarrow \ddot{q} + \frac{1}{LC}q = 0$ $q(t) = Cu_C(t)$ $i(t) = \frac{dq}{dt} = C\frac{du_C}{dt}$
Énergies	$\mathcal{E}_C = \frac{1}{2}Cu^2$	$\mathcal{E}_L = \frac{1}{2}Li^2$	$\mathcal{E}_T = \frac{1}{2}CE^2$