

# Capacitors Inductors 001

Problem has been graded.

---

You are given a capacitor with a capacitance  $C_1$ . At time  $t = 0$ , the voltage across this capacitor is  $V_o$ .

If a constant current  $I_1$  flows through the capacitor, how long will the capacitor take to charge up to a charge of  $10 \text{ nC}$ ?

Given Variables:

$C_1 : 8 \text{ nF}$

$V_o : 1 \text{ V}$

$I_1 : 2 \text{ mA}$

Calculate the following:

$t \text{ (us)} :$