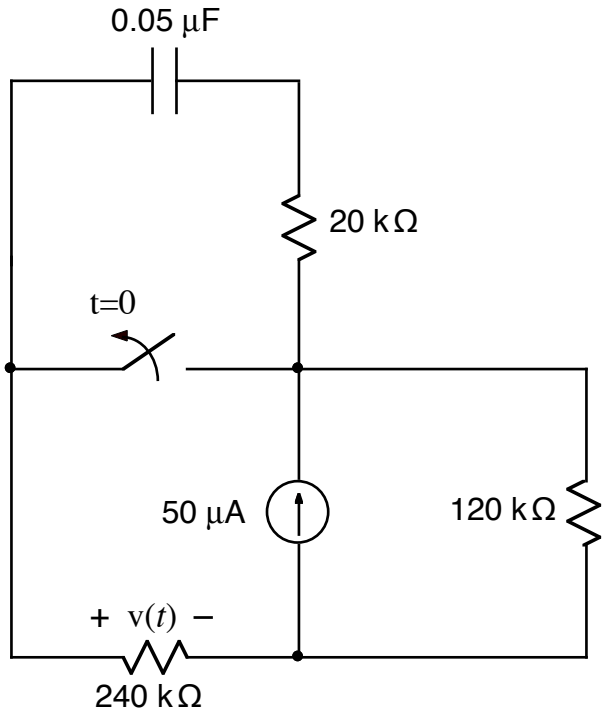
EX:



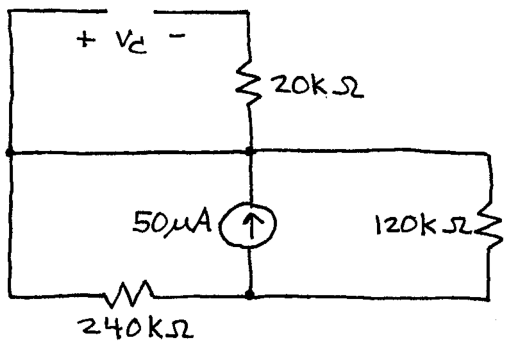
Calculate the energy stored on the capacitor at $t = 0^+$.

Soln: Energy $w_c = \frac{1}{2} C v_c^2(t=0^+)$

Since capacitor voltage cannot change instantly, $v_c(0^+) = v_c(0^-)$.

At $t=0^-$, C acts like open circuit and switch is closed.

$t=0^-$:



The short created by the switch creates a voltage loop on top left with 0V across C and across the 20KΩ resistor.

Thus $v_c(0^-) = 0V = v_c(0^+)$.

$\therefore \; w_c(0^+) = 0\,J$

Note: The units for energy are Joules.