

Chapter 7, Solution 2.

Find the time constant for the RC circuit in Fig. 7.82.

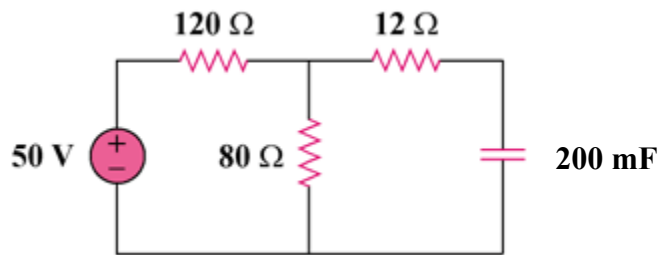


Figure 7.82
For Prob. 7.2.

Solution

$$\tau = R_{th}C$$

where R_{th} is the Thevenin equivalent at the capacitor terminals.

$$R_{th} = 120 \parallel 80 + 12 = 60 \, \Omega$$

$$\tau = 60 \times 200 \times 10^{-3} = 12 \, \text{s}.$$