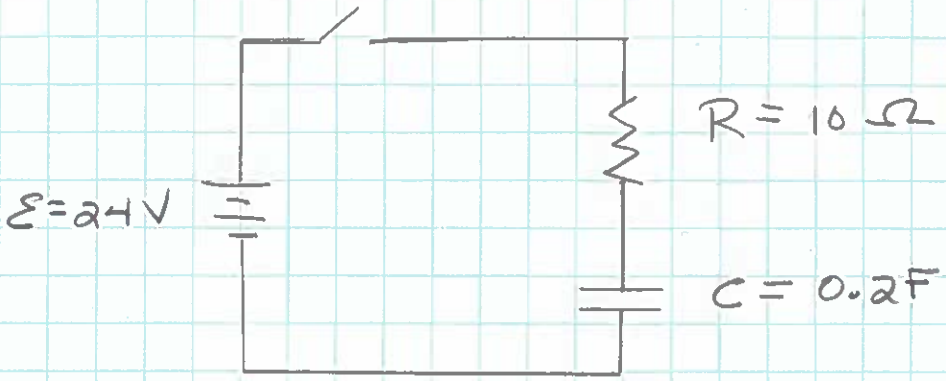

Close switch at $t = 0$:

For charging capacitor:

$$Q(t) = C\mathcal{E}\left(1 - e^{-t/\tau}\right) \qquad \tau = RC = 2\,s$$

$$Q_{max} = C\mathcal{E}$$

So:

$$Q(t) = \frac{Q_{max}}{2} = Q_{max}\left(1 - e^{-t/\tau}\right)$$

$$\frac{1}{2} = 1 - e^{t/\tau}$$

Or, $$e^{-t/\tau} = \frac{1}{2}$$

$$-\frac{t}{\tau} = \ln(1/2)$$

So $$t = -\tau \ln(1/2) = 1.386\ s$$

Note: this is the same time for the current to fall to one half its initial value:

$$I(t) = \frac{1}{2}\frac{\mathcal{E}}{R} = \frac{\mathcal{E}}{R}e^{-t/\tau}$$

$$t = -\tau \ln(1/2)$$