Specification of RC circuit by 3 device properties:

- $\mathcal{E}$ [V] (emf)
- $R$ [$\Omega$] (resistance)
- $C$ [F] (capacitance)

Physical properties of RC circuit during charging process determined by 3 combinations of the device properties:

- $\mathcal{E}/R = I(t = 0)$: rate at which charge flows onto capacitor initially
- $\mathcal{E}C = Q(t = \infty)$: total charge placed on capacitor ultimately
- $RC = \tau$: time it takes to place 63% of the charge onto the capacitor
  
  \[1 - e^{-1} = 0.632 \ldots]