

EE 2240

Problem #01

Two capacitors each have an accumulated charge of $50 \mu\text{C}$.

a. One capacitor has 10 V across it. What is the value of the capacitance?

$$Q = CV \Rightarrow C = \frac{Q}{V} = \frac{50 \mu\text{C}}{10\text{V}} = 5 \mu\text{F}$$

b. The other capacitor has a value of $10 \mu\text{F}$. Determine the voltage across it.

$$Q = CV \Rightarrow V = \frac{Q}{C} = \frac{50 \mu\text{C}}{10 \mu\text{F}} = 5\text{V}$$