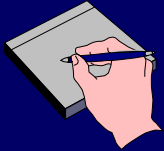


Example



Series Practice

A $4\ \mu\text{F}$ capacitor and $6\ \mu\text{F}$ capacitor are connected in series and charged to 5 volts. Calculate C_{eq} , and the charge on the $4\ \mu\text{F}$ capacitor.

$$C_{\text{eq}} = \left(\frac{1}{C_4} + \frac{1}{C_6} \right)^{-1} = \left(\frac{1}{4\ \mu\text{F}} + \frac{1}{6\ \mu\text{F}} \right)^{-1} = 2.4\ \mu\text{F}$$

$$Q = CV$$

$$Q_4 = Q_6 = Q_{\text{eq}} = C_{\text{eq}} V = (2.4\ \mu\text{F})(5\text{V}) = 12\ \mu\text{C}$$

