



$$\frac{1}{C_{\text{total}}} = \frac{1 \times 10^6}{3 \times 10^6} + \frac{1 \times 10^6}{6 \times 10^6} + \frac{1 \times 10^6}{12 \times 10^6} + \frac{1 \times 10^6}{24 \times 10^6}$$

$$\frac{1}{C_{\text{total}}} = \frac{15}{24}$$

$$C_{\text{total}} = 24$$

$$C_{\text{total}} = \frac{24}{15} = \frac{8}{5} \mu\text{F}$$

$$C_{\text{total}} = 1.6 \mu\text{F}$$

$$C = \frac{Q}{\Delta V} \Rightarrow C_{\text{total}} = \frac{Q}{\Delta V}$$

$$Q = C_{\text{total}} \Delta V$$

$$= 1.6 \times 10^{-6} \frac{\text{C}}{\text{V}} \times 10 \text{ V}$$

$$= 20.4 \times 10^{-6} \text{ C}$$

$$= 2.04 \times 10^{-5} \text{ C}$$