

P #A

Ch 15 - Worksheet

$$q = +2.4 \mu\text{C} \cdot \frac{10^{-6} \text{C}}{1 \mu\text{C}} \cdot \frac{1 \text{ electron}}{-1.602 \times 10^{-19} \text{C}}$$

$$= 1.5 \times 10^{13} \text{ electrons (removed)}$$

P #B

$$q_0 = +8.0 \mu\text{C} = +8.0 \times 10^{-6} \text{C}$$

$$\Delta q = 6.0 \times 10^{13} \text{ electrons} \cdot \frac{-1.602 \times 10^{-19} \text{C}}{1 \text{ electron}}$$

$$\Delta q = -9.612 \times 10^{-6} \text{C}$$

$$q_{\text{total}} = q_0 + \Delta q$$

$$= (+8.0 \times 10^{-6} \text{C}) + (-9.612 \times 10^{-6} \text{C})$$

$$q = -1.612 \times 10^{-6} \text{C}$$