

60. (a) The equivalent capacitance is

$$C_{\text{eq}} = \frac{C_1 C_2}{C_1 + C_2} = \frac{(6.00 \mu\text{F})(4.00 \mu\text{F})}{6.00 \mu\text{F} + 4.00 \mu\text{F}} = 2.40 \mu\text{F} .$$

(b) $q = C_{\text{eq}} V = (2.40 \mu\text{F})(200 \text{ V}) = 4.80 \times 10^4 \text{ C}.$

(c) $V_1 = q/C_1 = 4.80 \times 10^4 \text{ C}/2.40 \mu\text{F} = 120 \text{ V},$ and $V_2 = V - V_1 = 200 \text{ V} - 120 \text{ V} = 80 \text{ V}.$