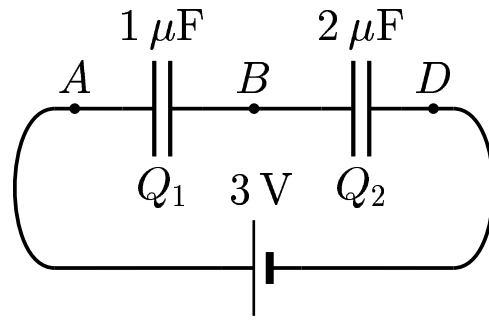


Given $C_1 = 1 \mu\text{F}$, $C_2 = 2 \mu\text{F}$, $\mathcal{E} = 3 \text{ V}$.



Find the ratios $\frac{Q_1}{Q_2}$.

- A) $\frac{Q_1}{Q_2} = 1$
- B) $\frac{Q_1}{Q_2} = 2$
- C) $\frac{Q_1}{Q_2} = \frac{1}{2}$
- D) $\frac{Q_1}{Q_2} = \frac{1}{3}$

Note: Each capacitor is a neutral system, so for C_1 and C_2 the corresponding charges must be $(Q_1, -Q_1)$ and $(Q_2, -Q_2)$.

From the figure it follows that $Q_1 = Q_2$.

$$\text{So } \frac{Q_1}{Q_2} = 1.$$

Answer A.

26.03-01 Two Capacitors in Series 2004-3-24