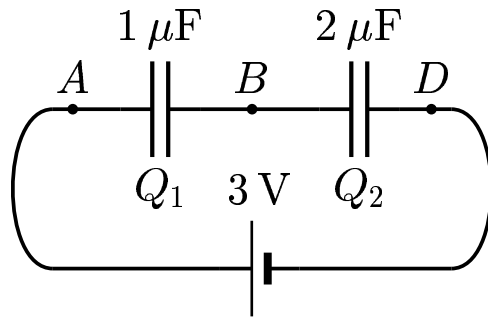Given $C_1 = 1\,\mu\text{F}$, $C_2 = 2\,\mu\text{F}$, $\mathcal{E} = 3\,\text{V}$.

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

A) $\dfrac{Q_1}{Q_2} = 1$

B) $\dfrac{Q_1}{Q_2} = 2$

C) $\dfrac{Q_1}{Q_2} = \dfrac{1}{2}$

D) $\dfrac{Q_1}{Q_2} = \dfrac{1}{3}$

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

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

So $\dfrac{Q_1}{Q_2} = 1$.

Answer **A**.