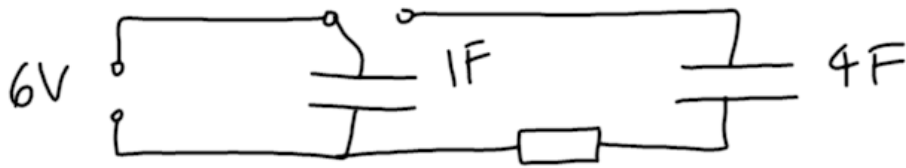# Capacitor discharging to a capacitor

A 1F capacitor is charged with a 6V power supply.

It is then connected in series with a fixed resistor (value not important) and an uncharged 4F capacitor.

1. How much charge is originally on the 1F capacitor?

2. How much charge ends up on each capacitor? Clue: charge redistributes until the voltage across each capacitor is equal.

3. Sketch a graph of voltage against time for the 1F capacitor.

4. Sketch a graph of voltage against time for the 4F capacitor.

5. Sketch a graph of voltage against time for the resistor.