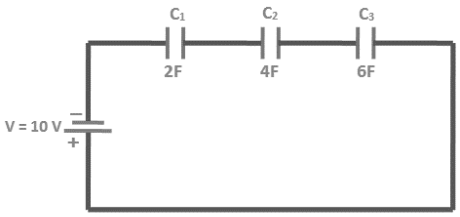
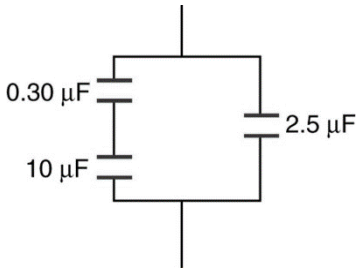
# Series and Parallel Circuits – Capacitors

**Find the equivalent capacitor for the series, parallel, and complex circuit**

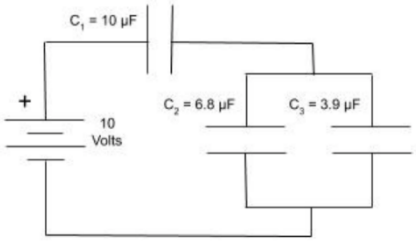
**1. $C_{eq}$=**



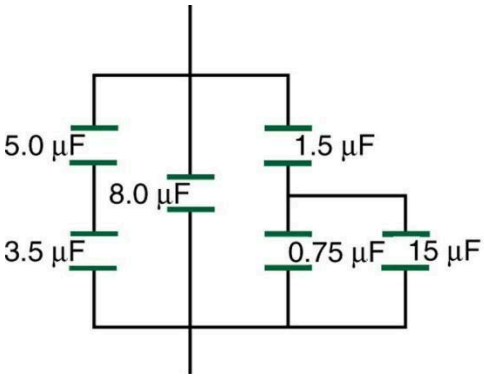

**2. $C_{eq}$=**




**3. $C_{eq}$=**

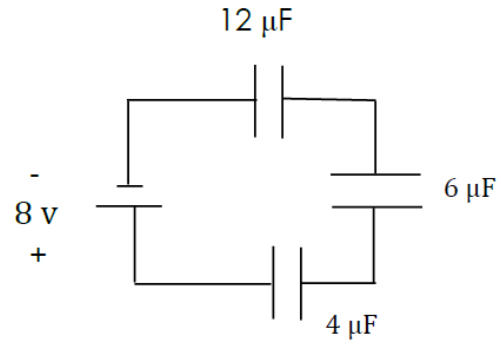



**4. $C_{eq}$=**



Three capacitors 12 μF, 6μF, and 4μF are connected in series with an 8 v battery. Determine:

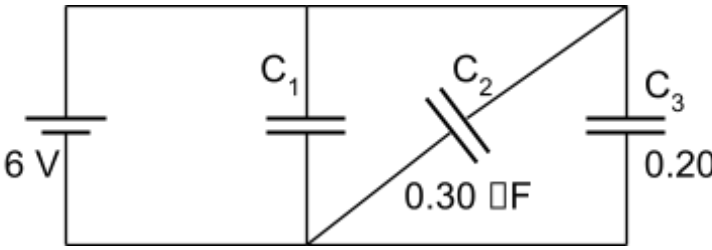
1. The capacitance of the circuit.
2. The charge drawn from the battery.
3. The charge on each capacitor.
4. The energy supplied by the battery in charging the capacitors.
5. The energy stored in each capacitor.




5. For the arrangement of three capacitors shown in the diagram:

a. What value of $C_1$ will give a ***total*** equivalent capacitance of 1.7 μ? (Hint: the diagram looks strange, but don't let that fool you)

b. Now that you know $C_1$, find the charge stored on and the voltage across each capacitor.




6. Given the arrangement of capacitors given to the right, answer the following questions. You will probably not answer these questions in the exact order they are asked.

a. What is the equivalent capacitance of this arrangement?

b. What is voltage across each capacitor?

c. What is the charge on each capacitor?

