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PP B – Capacitance – p. 607

1. A 4.00 μF capacitor is connected to a 12.0V battery.
2. What is the charge on each plate of the capacitor.
3. If this same capacitor is connected to a 1.50 V battery, how much electrical potential energy is stored?
4. A parallel-plate capacitor has a charge of 6.0μC when charged by a potential difference of 1.25 V.
5. Find its capacitance.
6. How much electrical potential energy is stored when this capacitor is connected to a 1.50 V battery.

1. A capacitor has a capacitance of 2.00 pF.
2. What potential difference would be required to store 18.0 pC?
3. How much charge is stored when the potential difference is 2.5 V?
4. You are asked to design a parallel plate capacitor having a capacitor of 1.00 F and a plate separation of 1.00 mm. Calculate the required surface area of each plate. Is this a realistic size for a capacitor.