Name _____ Electric Circuits HW#7

- Read the textbook section regarding Capacitors in Circuits from Mrs.Nadworny's webpage.
- In Mastering Physics, complete the Reading Passage questions.
- Complete the following questions. Show all work. If you need more room, attach looseleaf.

1. A 4.0 μF and an 8.0 μF capacitor are connected in parallel across a 25 V battery. Find (a) the equivalent capacitance and (b) the total charge stored in the two capacitors.

2. Three capacitors (4.0, 6.0, and 12.0 μF) are connected in series across a 50.0 V battery. Find the voltage across the 4.0 μF capacitor.

3. A 3.0 μF capacitor and a 4.0 μF capacitor are connected in series across a 40.0 V battery. A 10.0 μF capacitor is also connected directly across the battery terminals. Find the total charge that the battery delivers to the capacitors.