

## Voltage Worksheet #2

1. A flashlight battery is made with two AAA cells. The cells each have a total charge of  $6\,480\text{ C}$  and have  $9\,720\text{ J}$  of potential energy. What is the voltage of the cells?
2. During the time that a light bulb was on, it converted  $54\,000\text{ J}$  of energy into light and heat. The light bulb was plugged into a  $120\text{ V}$  outlet. What amount of charge, in coulombs, passed through the light bulb while it was on?
3. A Van de Graff generator has a voltage of  $350\,000\text{ V}$  and a charge of  $0.000\,073\text{ C}$ . How much electric potential energy does the charge have?
4. A car battery has a voltage of  $12\text{ V}$  and uses  $151\,000\text{ J}$  of energy to start a car. How much electric charge does the battery hold?
5. A capacitor is a device that stores energy. The capacitor of a camera flash unit has a charge of  $0.83\text{ C}$  and a voltage of  $480\text{ V}$ . How much energy is stored in the capacitor?
6. A lithium photo battery has a voltage of  $6\text{ V}$  and energy of  $5\,400\text{ J}$ . What is the amount of charge in the battery?