

**AP Physics B**  
**Experiment, Electrostatics**

Name: \_\_\_\_\_

The purpose of this experiment is to map the electric field of a given configuration of charges. You will be given a charge configuration on a sheet of semi-conducting paper. The configuration is drawn in conducting paint, so that when it is attached to a power supply (battery), one side will be positive and one will be negative. You will use a voltmeter to map out the electric potential of the configuration at 2 cm intervals. Then, you will draw lines representing equipotential surfaces. Finally, you will draw the electric field lines in, keeping in mind that the field lines are always perpendicular to each equipotential surface that they cross.

- (1) Title, Names, etc. (Section 1 on the handout: Lab Write Ups)
- (2) Purpose (Section 2 on the handout: Lab Write Ups)
- (3) Method (Section 3 on the handout: Lab Write Ups)
- (4) Data (Section 4 on the handout: Lab Write Ups)

You should make copies of your equipotential surface map for each group member. Then, on your own, you should draw in the field lines for your charge configuration. You should turn in this drawing with your lab report.