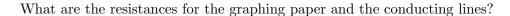# Electric Fields and Potentials

As you work through the steps in the lab procedure, record your experimental values and the results on this worksheet. Use the exact values you record for your data to make later calculations. Include units in your answer.

Setting Up the Experiment

What are the resistances for the graphing paper and the conducting lines?

Why can't ordinary paper be used? Why can't a copper sheet be used?

Equipotentials for a Parallel Plate Configuration

> Checkpoint 1:   Ask your TA to check your potential map for this configuration before uploading your picture and moving to the next step.

Upload your Excel spreadsheet with x and y coordinates for the equipotential surfaces. (Submit a file with a maximum size of 1 MB. *You will upload this file in the WebAssign question.*)

Upload your picture of the equipotential lines and direction of the electric field for this configuration. (Submit a file with a maximum size of 1 MB. *You will upload this file in the WebAssign question.*)

Summarize your results.

Equipotentials for a Dipole Configuration

> **Checkpoint 2:** Ask your TA to check your potential map for this configuration before uploading your picture and moving to the next step.

Upload your Excel spreadsheet with x and y coordinates for the equipotential surfaces. (Submit a file with a maximum size of 1 MB. *You will upload this file in the WebAssign question.*)

Upload your picture of the equipotential lines and direction of the electric field for this configuration. (Submit a file with a maximum size of 1 MB. *You will upload this file in the WebAssign question.*)

Summarize your results.

Equipotentials for the Surface and Point Configuration

> **Checkpoint 3:** Ask your TA to check your potential map for this configuration before uploading your picture and moving to the next step.

Upload your Excel spreadsheet with x and y coordinates for the equipotential surfaces. (Submit a file with a maximum size of 1 MB. *You will upload this file in the WebAssign question.*)

Upload your picture of the equipotential lines and direction of the electric field for this configuration. (Submit a file with a maximum size of 1 MB. *You will upload this file in the WebAssign question.*)

Summarize your results.