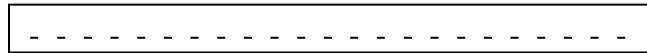
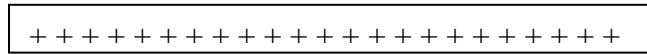


Name: _____ Lab Section: _____ Date: _____

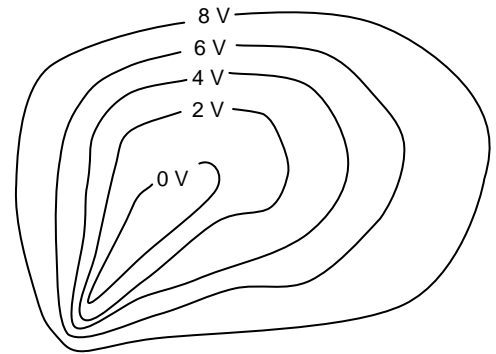
Prelab: E-Fields

Instructions: Prepare for this lab activity by answering the questions below. Note that this is a **PreLab**. It must be turned in at the start of the lab period. Time cannot be given in lab to perform PreLab activities. After the start of lab activities, PreLabs cannot be accepted. Explain your answers. Points will be taken off if your work is not neat and well organized.

1. (5 points) The top plate has a positive charge Q , and the bottom plate has a negative charge Q . Draw electric field lines, using solid lines, for the two parallel plate conductors below. Draw equipotential lines, using dashed lines, for the two parallel plate conductors below.



2. The figure to the right is an equipotential contour map.
- a) (2 point) In this figure, place an X at the location where the electric field is the strongest and a Y at the location where the electric field is the weakest.
- b) (4 points) Suppose you need to "push" an electron from the 0-V contour to the 8-V contour. Which route would require the least force? Least energy? Explain your answer



- c) (4 points) Does the energy required to move an electron from the 8-V contour to the 0-V contour depend on the path? Explain your answer