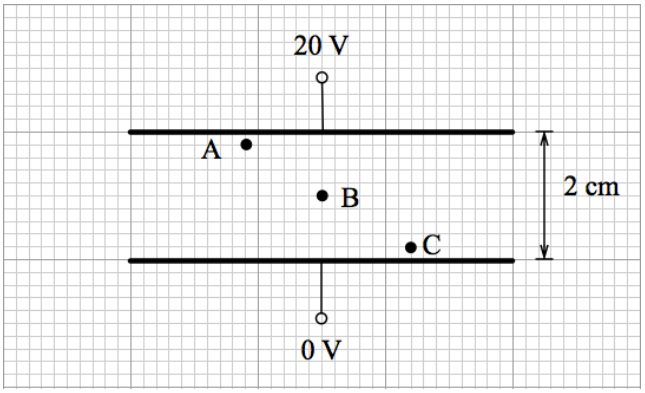
Parallel Plate Analysis **Name** _____

Physics II **Period** _____



1. Use lines with arrows in them to draw "field lines" around the charged metal plates shown above to represent the electric field they produce.
2. In the diagram above use dashed lines to draw equipotential lines at 5 V intervals between these plates.
3. Rank from strongest to weakest the strength of the electric field at the lettered points in the diagram above. Ties can be indicated with "equals" signs (=). Give an account of your reasoning.

4. Calculate an approximate value for the strength of the electric field at point **B**.

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5. Calculate the difference in potential, $V_C - V_B$ between points **B** and **C**.

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6. Calculate the change in potential energy that would occur if a particle carrying a charge of -2μC is moved from the bottom plate to the top plate.

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7. Plot a properly labeled graph of potential *vs* position from below the bottom plate to above the top plate on the set of axes provided.