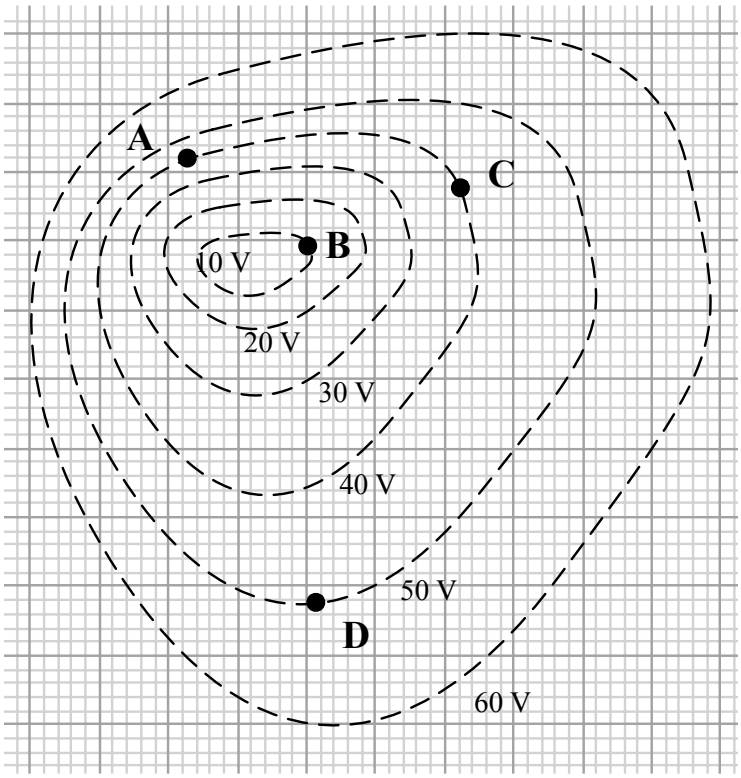
Analyzing a Field using Equipotentials **Name** _____

Physics II **Period** _____



(Major grid lines are 1 cm apart.)

1. Draw arrows at points **A**, **B**, and **C** to indicate the direction of the electric field at those locations.
2. At which of the lettered points is the strength of the electric field the greatest? Give an account of your reasoning.

3. Calculate an approximate value for the strength of the electric field at point **D**.
4. Calculate the difference in potential, $V_C - V_B$ between points **B** and **C**.
5. Calculate the change in potential energy that would occur if a particle carrying a charge of -2μC is moved from point **A** to point **D**.

6. If the charged particle carrying a charge of -2μC is moved from point **A** to **C** and then to **D**, would the change in potential energy be different from the answer to the previous item, and if so, how?