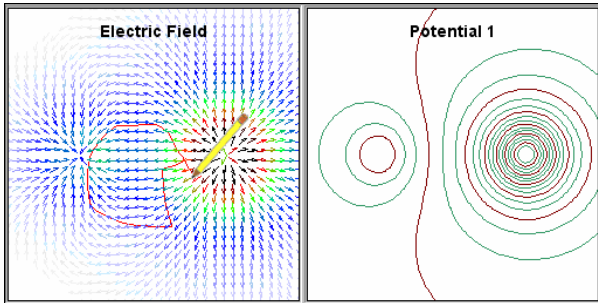


Worksheet for Exploration 25.1: Investigate Equipotential Lines



The panel on the left displays an electric field vector plot. The arrows in the field plot represent the direction and the colors represent the magnitude of the electric field.

- a. What is an equipotential line?
 - i. You should discuss how this relates to energy or work, and also to the orientation of E field lines (or vectors).

- b. How can such a line be determined from an electric field representation like that shown in the left panel?

- c. Draw the equipotential lines for this field by dragging the pencil (at its tip) after clicking the *draw on* button. Use the print screen function on your computer to print out a copy of your drawing.
 - i. Your computer may be set up to copy the screen to the clipboard. You may need to open an application, paste the clipboard contents, and then print.

d. **After** you have drawn your lines, determine which potential plot (1, 2, 3, or 4) best represents the region. Explain your choice.

e. Was your drawing a good representation of the actual equipotential lines? Did you have any misunderstandings? Explain.