

NAME _____

1. The electric potential due to a point charge is given by $V=kq/r$ where q is the charge, r is the distance from q and $k = 8.99 \times 10^{-9} \text{ Nm}^2/\text{C}^2$. Show that the SI unit of electric potential is a volt.

2. What are equipotential lines?

3. How are equipotential lines used to obtain the electric field lines?

4. If the electric potential is different from zero in some region of space, can the electric field be zero in that same region? Explain your answer.

5. If the electric potential is zero in some region of space, can the electric field be different from zero in that region? Explain your answer.