

Write the equation for the electrostatic potential due to a point charge.

Solution The **ICONIC** equation is

$$V = k \frac{Q}{r}$$

If we choose a common set of units and put the charge at the position $\vec{r}'$, then this equation becomes:

$$V(\vec{r}) = \frac{1}{4\pi\epsilon_0} \frac{Q}{|\vec{r} - \vec{r}'|}$$