# Title

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Date

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#### 1 Electrostatics

## 2 Temp

When solving the problems finding the potential, one must notice a vital problem that the timing of using formula,

$$V(\mathbf{r}) = \int_{\mathcal{V}} \frac{1}{4\pi\epsilon_0} \rho(\mathbf{r}) \, d\tau$$

Notice that in the cases when **charges tend to infinity**, this formula isn't valid because its derivation assume reference point is at infinity, that is, the assumption of **zero potential** at infinity, which is not the case.