

Electrostatic Potential from Two Charges

- Find a formula for the electrostatic potential $V(\vec{r})$ that is valid everywhere in space for:
 - Two charges $+Q$ and $+Q$ placed on the z-axis at $z' = D$ and $z' = -D$.
 - Two charges $+Q$ and $-Q$ placed on the z-axis at $z' = D$ and $z' = -D$, respectively.
- Simplify your formulas for the special cases of:
 - the x -axis
 - the z -axis
- Discuss the relationship between the symmetries of the physical situations and the symmetries of the functions in these special cases.