1 Volume Charge Density, Version 2

You have a charge distribution on the x-axis composed of two point charges: one with charge $+3q$ located at $x = -d$ and the other with charge $-q$ located at $x = +d$.

(a) Sketch the charge distribution.

(b) Write an expression for the *volume* charge density $\rho(\vec{r})$ everywhere in space.