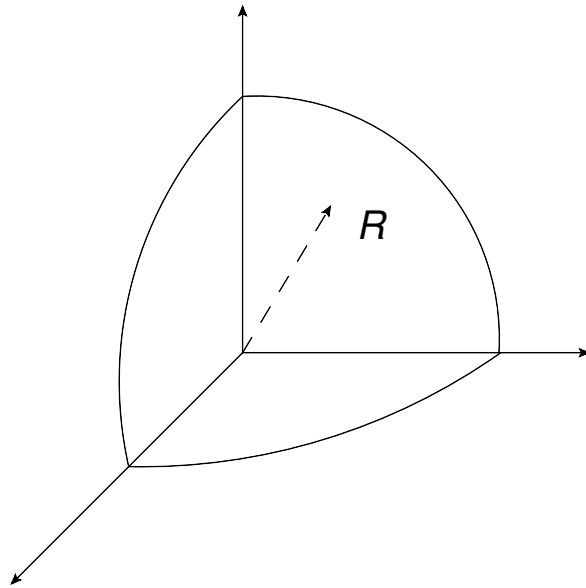


HW assignment 3

Due Mon Sept 23 at 5 p.m. in my mailbox

Problem 1.

Consider $1/8$ of a spherical shell of radius R (that is, surface with $r = R$ and $x, y, z \geq 0$) uniformly charged with surface density σ . Find the potential and the electric field at the origin.



Problem 2.

Solve the same problem for $1/8$ of a sphere (ball) defined by $r \leq R$ and $x, y, z > 0$. Assume that it is uniformly charged with volume density ρ .