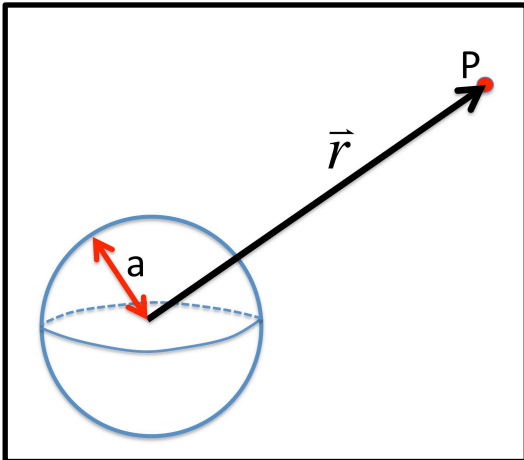Quiz #1

Name:

PID #:

Problem 1

Given an uniformly charged sphere with radius a with total charge of Q. We are observing electric fields at point P with a position vector **r** away with respect to the center of the charged sphere.
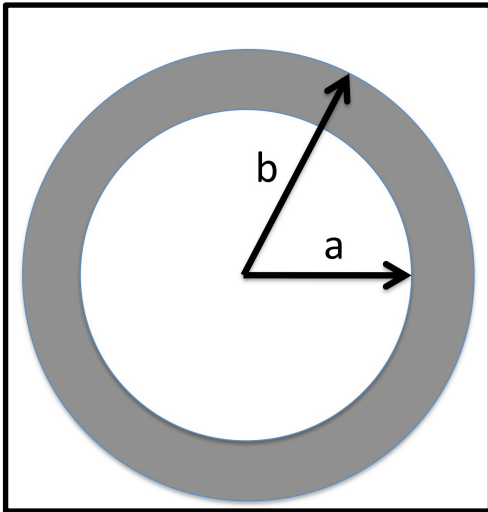

(a) Calculate electric field when r > a

(b) Calculate electric field when r < a

Problem 2
Consider an uniformly charged hollow sphere with cross section as depicted below.
The volume charge density is ρ (C/m³).

Calculate electric field (as a function of r:
radial position with respect to the center of
the hollow sphere) for
(a) r > b

(b) a<r<b

(c) r<a