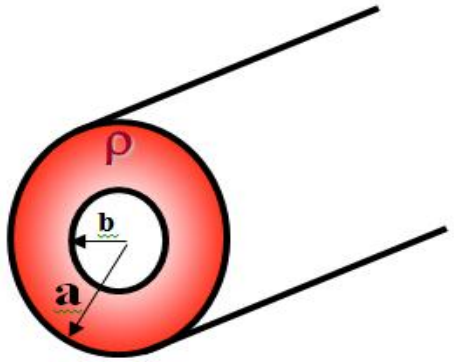
Quiz 1

1- A point charge of 30 nC is located at the origin while plane y = 3 carries a surface charge density of ρ_s = 10 nC/m^2. Find **D** at (0, 4 , 3).

2- Find the electric field intensity **E** anywhere inside and outside the hollow charged cylinder as shown in the Figure, with charge density $\rho = \rho_v$.



3- Three point charges Q_1 = 1 nC, Q_2 = -2 nC, and Q_3 = 3 nC are positioned one at a time and in that order at (0, 0, 0) , (1, 0, 0) and (0, 0, -1) respectively. Calculate the energy in the system after each charge is positioned.