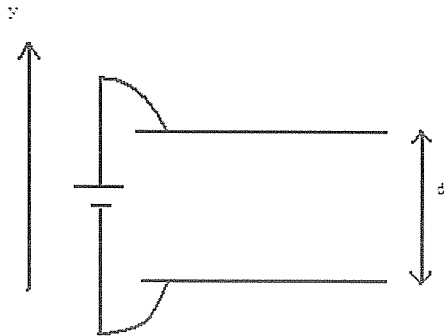


Problem 1:

Find the electric potential between the two plates:

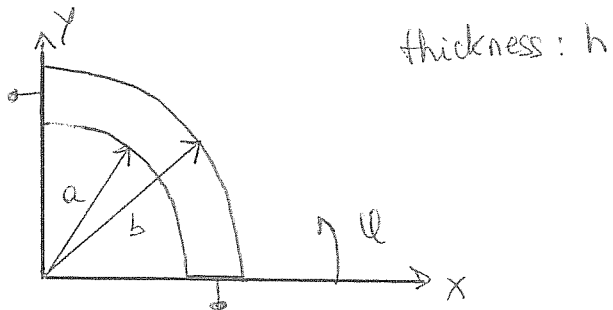


$$\rho_v = -\rho_0 y/d$$

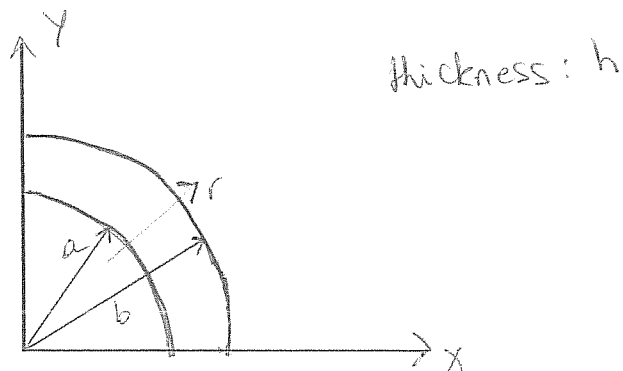
Problem 2

Calculate the resistances in the two parts

- Part 1: along Φ

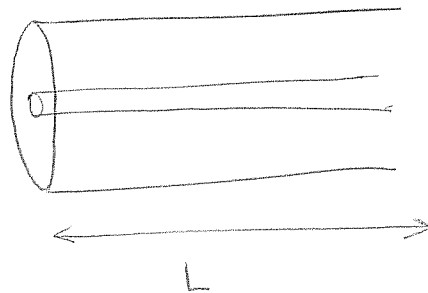


- Part 2: along r



Problem 3

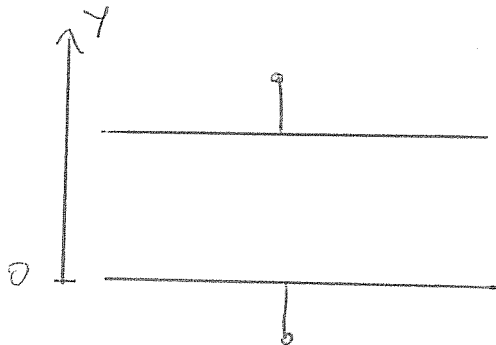
Calculate the capacitance of the following coaxial cable.



inner radius : a
outer radius : b .

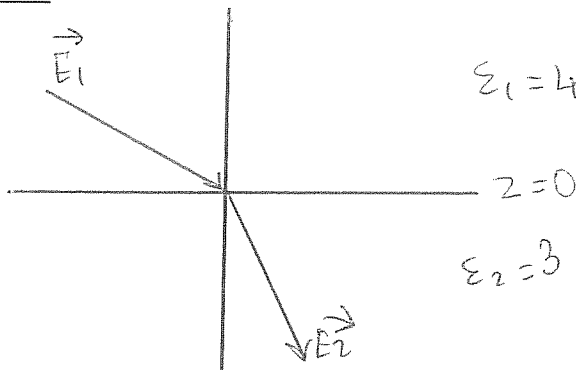
Problem 4

Calculate the capacitance of the parallel plate capacitor.



Problem 5:

Get \vec{E}_2



$$\vec{E}_1 = 5\vec{a}_x - 2\vec{a}_y + 3\vec{a}_z \quad (z \geq 0)$$

Some extra cases to be taken into consideration.