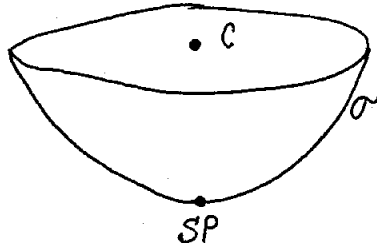


PHY3323: ELECTROMAGNETISM I

Problem set 6, (due Oct. 9, 2008)

PROBLEM 1

A hemispherical bowl of radius R carries a uniform surface charge σ . Find the potential difference between the "South pole" (SP) and the center (C).

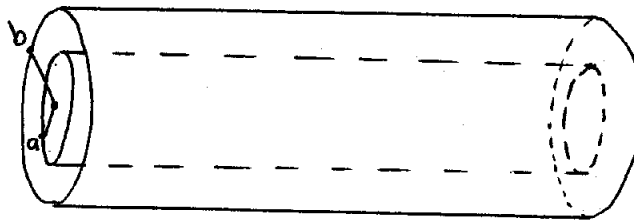


PROBLEM 2

A metal sphere of radius R carries a total charge Q . Find the force of repulsion between the two hemispheres of the sphere.

PROBLEM 3

Find the capacitance per unit length of two coaxial metal cylindrical tubes of radii a and b .



the tubes are very long.