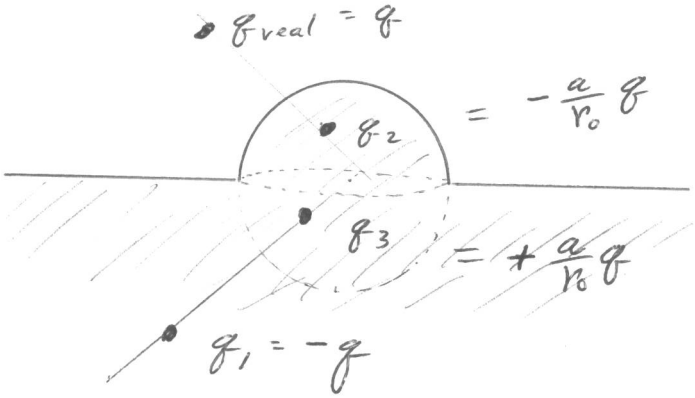
iv) hemispherical boss on a conducting plane:



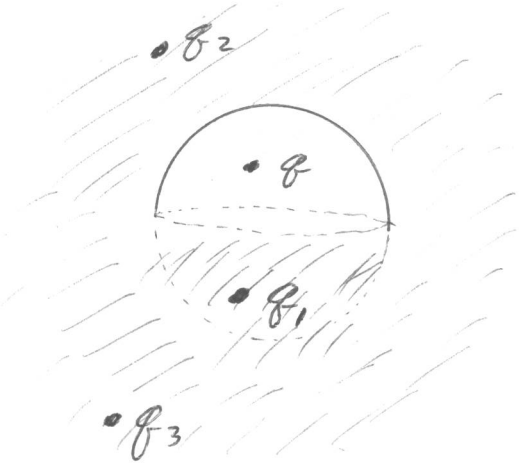
r_0 = distance of real charge from the center of the sphere.

a = radius of sphere

$r_0 > a$

Note: this image solution will not work for a hemispherical "dip" in the conductor. Why not? Image charges would be in V and that is disallowed.

v) hemispherical cavity in a conductor



$q_1 = -q$

$q_2 = -\frac{a}{r_0} q$

$q_3 = +\frac{a}{r_0} q$

$r_0 < a$

vi) 1/4 spheres, 1/8 spheres, etc.

End Lecture #7