Quiz 2

1- Two point charges of 5 nC and -20 nC are located at (-3, 2, 4) and (1, 0, 5) above a grounded conducting plane z = 2. Calculate **D** at (3,4,8) and (1, 1, -1).

2- A negative point charge $Q_1 = -100 \, [\text{mC}]$ is placed at a distance d = 50 [cm] in front of a grounded metallic sphere of radius a = 25 [cm]. **Find**:

- The value of its image Q_2 and its place with respect to the sphere center.
- The force acting on the charge Q_1 due to the conducting sphere.