Homework 2.

1) Find the force on charge $Q_1$, $10 \mu C$, due to charge $Q_2$, $-100 \mu C$, where $Q_1$ is at (0, 0, 1) m, and $Q_2$ at (2, 2, 0) m.

2) Two point charges, $Q_1 = 20 \mu C$ and $Q_2 = 10 \mu C$ are located at (1, 0, 1) m and (-1, -1, 0) m respectively. Find the force on $Q_1$.

3) Find $\vec{E}$ at P(2, 0, 2) due to a point charge $10 \mu C$ at the origin.

4) Find the force on a $10 \mu C$ charge at (0, 0, 5) m if two charges of $5 \mu C$ are located on the x axes at ± 2 m.

5) (omitted)

6) A uniform sheet charge with surface charge density $\rho_s = (10^{-6} / 6\pi) C / m^2$ is located at $y = 3m$. Determine the electric field at points (0, 5, 0) and (0, -10, 1).