Universidad de Puerto Rico
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Departamento de Ingeniería Eléctrica y Computadoras

INEL 4151 Asignacion #3: Semana de lunes 12 de septiembre de 2011.

Nombre:_____ Sección:_____

1. Point charges $Q_1 = 5\ \mu C$ and $Q_2 = -4\ \mu C$ are placed at (3,2,1) and (-4,0,6), respectively. Determine the force on Q_1.

2. A ring placed along $y^2 + z^2 = 4$, $x = 0$ carries a uniform charge of $5\ \mu C/m$. (**a**) Find **D** at P(3,0,0). (**b**) If two identical point charges Q are placed at (0,-3,0) and (0,3,0) in addition to the ring, find the value of Q such that **D** = 0 at P.

3. A volume charge distribution $\rho_v = 5xyz\ nC/m^3$ exists in the region defined by $0 \le x \le 2$, $-1 \le y \le 3$, $0 \le z \le 4$. Calculate the total charge in the region.