1. A particle (charge = 40 μC) moves directly toward a second particle (charge = 80 μC) which is held in a fixed position. At an instant when the distance between the two particles is 2.0 m, the kinetic energy of the moving particle is 16 J. Determine the distance separating the two particles when the moving particle is momentarily stopped.

2. N/A

3. Consider a uniform electric field E oriented in the x direction in empty space. A cube of edge length l, is placed in the field, oriented as shown. Find the net electric flux through the surface of the cube.