HW 1-7)

One model of the atom from the early 20<sup>th</sup> century is the Thomson model, in which a spherical positive charge, which we'll assume is uniform, contains a number of electrons. Let's further assume that, on average, the electrons are also uniformly distributed throughout the sphere.

- A) Consider one of the electrons. Excluding that electron, what is the net charge of the rest of the atom?
- B) If the atomic sphere has radius R, what is the force acting on that electron a distance r<R from the center?
- C) What type of motion would this electron therefor perform?



This will be an important discussion point in Physics III.