Physics 2110 -- Problem Set #2

1. A carbon atom and a hydrogen atom are separated by 2 nm. Where is the center-of-mass of this system?

2. In a water molecule the two hydrogen atoms are equidistant from the oxygen and separated by about 105˚. Make an approximate sketch of a water molecule and using the geometric construction described in the notes find where the position of the CM of the molecule.

3. A 2 ton truck is located at the corner of 400 N and Main and a 1 ton car is located at the corner of 800 N and 200 E. About where is the CM of this system? Draw a sketch.