

NAME:

***Reading Material “Observing Cells: Light and Electron Microscopes”** (can be found on the school website on our class homework page).

For each question below, give a detailed solution and explanation.

1. The DNA within each cell is almost 2 m long. The average human has 75 trillion cells. Imagine the DNA from all the cells in your body uncoiled and stretched end to end. How far would that reach in the Solar System? (After you come up with a number, google “solar system scale”; don’t forget to convert your “reach” from meters into astronomical units $1\text{AU}=1.5*10^{11}\text{ m}$)
2. What do *proteins*, *complex carbohydrates* and *DNA* have in common with respect to their structure?