

Name \_\_\_\_\_ Period \_\_\_\_\_

College Prep Chemistry of the Earth

Assignment 6A – Introduction to the Mol

20 Points

*Answer the following questions based on the in class presentation*

|                          |                            |
|--------------------------|----------------------------|
| Define Avogadro's Number | Value of Avogadro's Number |
|                          |                            |
| Define Mass Number       | Define Atomic Mass         |
|                          |                            |
| Define Atomic Mass Unit  | Define Average Atomic Mass |
|                          |                            |
| Define Mol               | Define Molar Mass          |
|                          |                            |

*Subatomic Particle Data Tables*

|                                     |                                     |                                            |                                        |
|-------------------------------------|-------------------------------------|--------------------------------------------|----------------------------------------|
| Mass Proton ( $p^+$ )               | Mass Neutron ( $n^0$ )              | Atomic Mass Unit                           | Avogadro's #                           |
| $1.67 \times 10^{-24} \text{g}/p^+$ | $1.67 \times 10^{-24} \text{g}/e^-$ | $1.67 \times 10^{-24} \text{g}/\text{amu}$ | $6.022 \times 10^{23} \text{part/mol}$ |

*Complete the following chart based on the isotopes shown below*

| Isotope      | Atomic Mass (amu) | Atomic Mass (g)<br>(Mass# • amu) | Molar Mass (g/mol) |
|--------------|-------------------|----------------------------------|--------------------|
| Nitrogen-14  |                   |                                  |                    |
| Magnesium-24 |                   |                                  |                    |
| Titanium-48  |                   |                                  |                    |
| Selenium-80  |                   |                                  |                    |
| Iodine-127   |                   |                                  |                    |