

Name _____ Period _____

College Prep Chemistry of the Earth System

Assignment 1K – Atomic Mass and Isotope Review

20 Points

Complete the following Chart based on the isotope Series No Work = No Credit

Isotope A - X	<u>Atomic #</u>	<u>Mass #</u>	<u>Protons (p⁺)</u>	<u>Electrons (e⁻)</u>	Neutrons (n ^o)	<u>Atomic Mass (amu)</u>
Germanium- <u>70</u>	32	70	32	32	38	70amu
Germanium- 72	32	} all Ge			70-32=38	
Germanium- 73	32					
79 Br	35					
81 Br	35					

Calculate the average atomic mass for the isotopes shown above

Bromine has the following isotopes

Isotope	Atomic Mass	Fractional Abundance
Br-79	79 amu	0.0759
Br-81	81 amu	0.9241

Isotope	Atomic Mass	Frac. Abund.	Ratio
Br-79			
Br-81			

Calculate the Average Atomic Mass of Br

Germanium has the following isotopes

Isotope	Atomic Mass	Fractional Abundance
Ge-70	70 amu	0.2084
Ge-72	72 amu	0.4288
Ge-73	73 amu	0.3628

Isotope	Atomic Mass	Frac. Abund.	Ratio
Ge-70	70amu	0.2084	= 14.59 amu
Ge-72	72amu	0.4288	= 30.87 amu
Ge-73	73amu	0.3628	= 26.48 amu

Calculate the Average Atomic Mass of Ge

$$= 14.59 \text{ amu} + 30.87 \text{ amu} + 26.48 \text{ amu} = 71.94 \text{ amu} \text{ (avg. atomic mass)}$$