Name: _____ Date: _____

CHEMISTRY
Atomic Mass & Ions

Part 1: Determine the atomic mass of the elements using the isotopes and abundances.

1. Change the abundances from % to the decimal.
2. Calculate the sum-product of the atomic mass (nuclide number) and decimal abundance.

1. Chlorine has two abundant isotopes.

35-Cl = 76%
37-Cl = 24%

(__ · __) + (__ · __) = _____ + _____ = _____ g/mol

2. Sulfur has three abundant isotopes.

32-S = 95%
33-S = 0.8%
34-S = 4.2%

(__ · __) + (__ · __) + (__ · __) =

_____ + _____ + _____ = _____ g/mol

3. Iron has four abundant isotopes.

54-Fe = 5.8%
56-Fe = 91.7%
57-Fe = 2.2%
58-Fe = 0.3%

(__ · __) + (__ · __) + (__ · __) + (__ · __) =

_____ + _____ + _____ + _____ = _____ g/mol

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4. Strontium has four abundant isotopes.

84-Sr = 0.5%
86-Sr = 9.9%
87-Sr = 7.0%
88-Sr = 82.6%

(__ · __) + (__ · __) + (__ · __) + (__ · __) =

_____ + _____ + _____ + _____ = _____ g/mol

Part 2: Ions. Determine if the atom is a cation or anion. Type **C** for cation. Type **A** for anion. Determine the number of protons, neutrons, and electrons in the atom buy using the nuclide number and the charge. Protons have a +1 charge. Electrons have a -1 charge.

	Cation Or Anion?	Z	#P	#N	#e-
$56\text{-}Fe^{2+}$					
$21\text{-}Na^{+}$					
$32\text{-}S^{2-}$					
$27\text{-}Al^{3+}$					
$35\text{-}Cl^{-}$					
$52\text{-}Mn^{4+}$					
$19\text{-}Fl^{-}$					
$230\text{-}Th^{4+}$					
$138\text{-}Ba^{2+}$					
$14\text{-}N^{3-}$					

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