

Atom (Ions/Isotopes) Worksheet

Part I: Fill in the following chart

Element/Ion	Atomic Number	Number of Protons	Number of Neutrons	Number of Electrons	Mass Number
${}^1_1\text{H}$					
${}^1_1\text{H}^+$					
${}^{12}_6\text{C}$					
${}^7_3\text{Li}$					
${}^{35}_{17}\text{Cl}^-$					
${}^{39}_{19}\text{K}$					
${}^{24}_{12}\text{Mg}^{2+}$					
${}^{75}_{33}\text{As}$					
${}^{108}_{47}\text{Ag}^+$					
${}^{32}_{16}\text{S}^{2-}$					
		30		28	66
	76		114		

Part II: Answer the following questions:

1. a. How can you tell if an atom has a negative charge?

b. How can you tell if an atom has a positive charge?

2. Define an isotope.

3. What would happen if the number of protons were to change in an atom?

4. Another way to write isotopes is to write the name of the element then add the mass number after a dash, for example, ${}^{14}_6\text{C}$ is carbon-14. Why isn't the atomic number needed for this notation?

5. What is similar about all of the atoms in Group 1? Group 7?