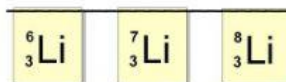


Name: _____

Date: _____

Class/Period: _____

**Isotopes, Ions, Average Atomic Mass Review****Part I: Directions:** Fill in the blank cells in the table below using the information given.Write formula here
for getting mass #!

Isotopic Notation	Isotope Name	Oxidation #	Atomic Number	Number Protons	Number Neutrons	Number Electrons	Mass Number
1. $^{106}_{47}\text{Ag}^{+1}$		+1					
2.	Sulfur-34	-2					
3.		0		10	11		
4.		0				99	155

Part II: Directions: Fill in the blanks below using the information provided.

Ion Chemical Formula	Type of Ion	Type/# of particles lost/gained	# p ⁺	# e ⁻	# n ⁰	Atomic #	Mass #
5.		Gain 1 e ⁻	85				219
6.		Loses 2 e ⁻			132	88	
7. In^{+3}							109
8.			34	36	40		

Part III - Directions: Carefully examine the following information. Use it to answer the questions below.

9. a) A particle has 51 protons and has lost 5 electrons. Write the ion chemical formula. _____
 b) Type of ion (cation/anion)? _____
10. a) A particle has 16 protons and has gained 2 electrons. Write the ion chemical formula. _____
 b) Type of ion (cation/anion)? _____

Part IV: Directions: Read the following questions/statements. Fill in the blank provided.

11. A neutral atom changes to an ion when it gains or loses which subatomic particle? _____
12. Which subatomic particle identifies an element? _____
13. Which subatomic particle causes one isotope of an atom to change to a different isotope of the same element? _____

14. What is the term for atoms of the same element with the same number of protons but differing numbers of neutrons? _____
15. Number of **protons** = Number of _____ for a **neutral** atom.
16. What does the atomic number correspond to in an atom? _____
17. What determines the mass number? _____
18. What is a cation and how does it form?
19. What is an anion and how does it form?

Part V: Average Atomic Mass - Directions: Show all work including formulas, units, math, etc.

20. a) Given the data in the table below, calculate the average atomic mass of unknown element X. _____

Isotope	Atomic Mass	Percent Abundance
x-6	6.015 amu	7.5%
x-7	7.016 amu	92.5%

- b) What is the identity of Element X contained in each isotope? _____

21. a) Given the data in the table below, calculate the average atomic mass of unknown element X. _____

Isotope	Atomic Mass	Percent Abundance
x-69	68.926 amu	60.108%
x-71	70.925 amu	39.892%