Chemistry Worksheet NAME: _____

Isotope Notation Block: _____

1. Uranium-235 and uranium-238 are considered isotopes of one another. How are uranium-235 similar, and how are they different?

2. Define isotope:

3. The number of protons in an atom is known as the _____ of that atom.

4. The number of _____ determines the name of the atom.

5. The mass number of an atom is the number of _____ plus the number of _____ in the nucleus of the atom.

6. The isotope notation for nitrogen-15 is as follows:
   a. The number 15 is the _____ number.
   b. The number 7 is the _____ number.
   c. How many neutrons does nitrogen-15 have? _____

7. Write the following in isotope notation:

a. zinc-66: _____	d. helium-4: _____	g. silver-108: _____
b. chlorine-35: _____	e. uranium-235: _____	h. thorium-234: _____
c. plutonium-239: _____	f. potassium-40: _____	i. oxygen-16: _____

j. the atom with 12 protons and 12 neutrons _____

k. the atom with 6 protons and 7 neutrons _____

l. the atom with 79 protons and 117 neutrons. _____

m. the phosphorus atom that has 17 neutrons. _____

n. the copper atom that has 34 neutrons. _____

o. the iodine atom that has 72 neutrons _____

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Complete the table. Recall that A = mass number, Z = atomic number, and ions have charge!

Name	${}^{A}_{Z}Sym^{+/-}$	Atom or ion?	Atomic Number	Mass Number	# of n°	# of p^+	# of e^-	Metal, non-metal, or metalloid?
	${}^{24}Mg$	Atom						
	${}^{30}Si$	Atom						
	${}^{108}Pd$	Atom						
		Atom		131		53		
		Atom	25		30			
	${}^{35}S^{2-}$							
	${}^{112}Cd^{2+}$							
					50	38	36	
			85		125		86	
	$^{4+}$			119	69			
				242		94	89	
		Atom			80	56		
	${}^{52}_{24}{}^{2+}$							