

Name: _____ Per _____

6. Draw a Bohr diagram of the following isotopes, including how many protons, neutrons, and electrons there are. State whether they are located in the nucleus or electron orbitals. Label everything.

Carbon-12

Protons____ Electrons____ Neutrons____

Carbon-14

Protons____ Electrons____ Neutrons____

- a. How are these atoms similar?
- b. How are they different?
7. What is an orbital? What do electrons in an orbital tell you?
8. There are four isotopes of lead: Lead-204 (1.4 %), Lead-205 (24.1 %), Lead-207 (22.1%) and Lead-208 (52.4%).
- a. Determine the number of neutrons in each of the above isotopes
- b. Determine the average atomic mass of lead. Give the answer to one decimal place.
9. Bromine has at least two naturally occurring isotopes: Rb-85 (natural abundance 50.69%) and Rb-87. If the average atomic mass is 79.904 what is the abundance of Rb-87?

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10. Complete the following table for **NEUTRAL ATOMS**

Atomic Number	Elemental Name	Atom Symbol	Atomic Mass (amu)	# of Protons	# of Neutrons	# of Electrons
23			51			
	Hassium		269			
		Pm	144			
			257	100		
			4		2	

11. Complete the following table for **IONS**

Atomic Number	Elemental Name	Ion Symbol	Atomic Mass (amu)	# of Protons	# of Neutrons	# of Electrons
38			88			
			14	7		
			127		75	
	Radon		222			

12. Give the **electron configuration** for the following elements

- Sodium
- Bromine
- Neon

13. Give the electron noble gas notation for the following elements.

- Fluorine
- Titanium
- Americium

14. Give the electron configuration notation and noble gas notation for the following ions.

- O^{2-}
- Y^{3+}

Check your work! The answers are posted on my website!! Use the following link.

<http://chemistrylove.wixsite.com/mrssnyder>