Science 9 – Spindlove – Chem Notes Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ATOMS**

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| Diagram, schematic  Description automatically generated | **Subatomic Particles:*** Neutrons: \_\_\_\_ nucleus; \_\_\_\_\_\_ charge
* Protons: \_\_\_\_\_\_ nucleus; \_\_\_\_\_ charge
* Electrons: \_\_\_\_\_\_\_\_\_\_\_\_\_ nucleus; \_\_\_ charge

*\*spread-out charge. We say electrons exist in* ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** *(sometimes called shells or orbitals)**NOTE: We recognize this is not the current****, \_\_\_\_\_\_\_\_\_\_\_\_\_*** *model.* |
| Diagram  Description automatically generated with medium confidence | * Charges that are opposite **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** each other
* Charges that are alike **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** each other
* The charge on the proton and electron are exactly the same **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** **(strength)** but **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, so they are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** to each other.
	+ *This is what holds the atom together*
 |
|  | * **Atomic Number**: the number of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** in the nucleus of each atom. It is always a whole number.
	+ *Pattern: atomic numbers increase one by one through the periodic table*
* **Atomic Mass:** the mass of an average atom of an element. It is written as a decimal. Mass is a combo of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** & **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
	+ *Pattern: atomic mass tends to increase along with atomic number*
* \*There are some exceptions, i.e. Co and Ni
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| A picture containing text  Description automatically generated |  |
| A close up of a ball  Description automatically generated | 1. How many electrons: **\_\_\_\_\_\_\_\_\_\_\_**
2. Which means there are how many protons: **\_\_\_\_\_\_\_\_\_\_\_**
3. And the # of protons represents the: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
4. Which element has this atomic number: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
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| Chart  Description automatically generated with medium confidence* Electrons exist in **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** pattern, filling from **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** 🡪 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** shells
* The electrons in the outermost shell (those farthest from the nucleus) have the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** influence on the properties of an atom
	+ These electrons in the outermost shell are called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
	+ The shell that contains the outermost electrons is called the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.
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| Example: Let’s draw the Bohr model of Neon | 1. Atomic # = # protons **\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. neutrons = atomic mass – protons **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
3. electrons = protons **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
4. Electrons arranged 2-8-8-18 pattern

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| Draw the Bohr model of Phosphorus | 1. Atomic # = # protons **\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. neutrons = atomic mass – protons **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
3. electrons = protons **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
4. Electrons arranged 2-8-8-18 pattern
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| **LEWIS STRUCTURES** The symbol of Argon atom is 40Ar18a) How many electrons are there in an  Argon atom?b) Draw the Bohr - Brainly.in  | Show arrangement of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_**electrons only  |
| ***EXAMPLES: Draw Lewis Dot Diagrams of the following:*** Be Mg F Cl |