**Atoms WS**

1. What is an atom?
2. Atoms are made of 3 things. What are they?
3. Which two of these things make up the nucleus?
4. Which of those three parts is NOT found in the nucleus?
5. What charge do protons carry?
6. What charge do neutrons carry?
7. What charge do electrons carry?
8. So protons and neutrons are in the nucleus. So what do we call the area where electrons stay?
9. What are electrons organized into?
10. What is the atomic number?
11. What is the average atomic mass?
12. What is the mass number?
13. Of the Average Atomic Mass, Atomic Number, and Mass Number, which of the above can be found on the periodic table?
14. Where is most all of the mass (Over 99.99999%) of an atom located?
15. Where is most all of the volume (Over 99.99999%) of the atom located?
16. Write/draw me the isotope notation for Sodium, with a mass number of 23, and a + charge.

**Atoms, Ions, and Isotopes**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Substance** | **Symbol** | **Atomic Number** | **Mass Number** | **Number of Protons** | **Number of Neutrons** | **Number of Electrons** | **Charge of Atom?** |
| Aluminum | Al+1 |  | 27 | 13 |  | 12 |  |
| Bromine |  | 35 | 80 |  | 45 | 36 |  |
| Uranium | U-1 | 92 |  |  | 146 | 93 |  |
| Helium | He | 2 | 4 |  |  |  |  |
| Helium | He | 2 | 5 |  |  | 2 |  |
| Lithium |  | 3 | 7 |  |  | 2 |  |
| Tungsten | W |  | 184 |  | 110 | 74 |  |
| Xenon |  |  |  |  | 79 | 54 |  |
| Magnesium | Mg+2 |  | 24 | 12 |  |  | +2 ion |
| Carbon |  | 6 |  |  | 6 |  | Neutral |
| Carbon | C |  | 14 | 6 | 8 |  |  |
| Nitrogen |  | 7 | 14 |  |  |  |  |
| **Substance** | **Symbol** | **Atomic Number** | **Mass Number** | **Number of Protons** | **Number of Neutrons** | **Number of Electrons** | **Charge of Atom?** |