Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_\_

Subatomic Particles and Bohr Model Worksheet

1. The subatomic particle with no electrical charge is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; the subatomic particle with a positive charge is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; the subatomic particle with a negative charge is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. In a neutral atom, there are the same number of these two particles: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. The atomic number (“element number”) is the same as the number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Where is most of the mass of an atom located? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Complete the following table.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Element Name | Element Symbol | Atomic Number | Atomic Mass | Number of Protons | Number of Neutrons | Number of Electrons |
| Sodium |  |  |  |  |  |  |
|  | K |  |  |  |  |  |
|  |  |  |  | 38 |  |  |
|  |  | 20 |  |  |  |  |
| Magnesium |  |  |  |  |  |  |
|  | Br |  |  |  |  |  |
| Aluminum |  |  |  |  |  |  |
|  |  |  | 54.9 |  |  |  |
|  | Ba |  |  |  |  |  |
|  |  | 17 |  |  |  |  |

1. Label the parts of this atom (nucleus, protons, electrons, neutrons).



1. The atomic number is the number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in one atom of an element. It is also the number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a neutral atom of that element. The atomic number gives the “identity” of an element. No two different elements will have the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ atomic number.
2. In order to calculate the number of neutrons, you must subtract the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. \*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reactions involve the sharing and giving of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The number of electrons in an element determines its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ properties.
4. Draw Bohr models for the following:

|  |  |  |
| --- | --- | --- |
| Lithium (Li) | Hydrogen (H) | Helium (He) |
| Magnesium (Mg) | Nitrogen (N) | Fluorine (F) |
| Argon (Ar) | Potassium (K) | Aluminium (Al) |