

Basic Atomic Structure Worksheet

1. The 3 particles of the atom are:

- a. _____
- b. _____
- c. _____

Their respective charges are:

- a. _____
- b. _____
- c. _____

2. The number of protons in one atom of an element determines the atom's _____, and the number of electrons determines the _____ of the element.
3. The atomic number tells you the number of _____ in one atom of an element. It also tells you the number of _____ in a neutral atom of that element. The atomic number gives the "identity" of an element as well as its location on the periodic table. No two different elements will have the _____ atomic number.
4. The _____ of an element is the average mass of an element's naturally occurring atom, or isotopes, taking into account the _____ of each isotope.
5. The _____ of an element is the total number of protons and neutrons in the _____ of the atom.
6. The mass number is used to calculate the number of _____ in one atom of an element. In order to calculate the number of neutrons you must subtract the _____ from the _____.

7. Give the symbol of and the number of protons in one atom of:

- | | | | |
|---------|-------|---------|-------|
| Lithium | _____ | Bromine | _____ |
| Iron | _____ | Copper | _____ |
| Oxygen | _____ | Mercury | _____ |
| Krypton | _____ | Helium | _____ |

8. Give the symbol of and the number of electrons in a neutral atom of:

- | | | | |
|----------|-------|--------|-------|
| Uranium | _____ | Iodine | _____ |
| Boron | _____ | Xenon | _____ |
| Chlorine | _____ | | |

9. Give the symbol of and the number of neutrons in one atom of:

(Mass numbers are ALWAYS whole numbers...show your calculations)

- | | | | |
|----------|-------|-----------|-------|
| Barium | _____ | Bismuth | _____ |
| Carbon | _____ | Hydrogen | _____ |
| Fluorine | _____ | Magnesium | _____ |
| Europium | _____ | Mercury | _____ |