

# 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 \_\_\_\_\_
- Iron \_\_\_\_\_
- Oxygen \_\_\_\_\_
- Krypton \_\_\_\_\_

- Bromine \_\_\_\_\_
- Copper \_\_\_\_\_
- Mercury \_\_\_\_\_
- Helium \_\_\_\_\_

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

- Uranium \_\_\_\_\_
- Boron \_\_\_\_\_
- Chlorine \_\_\_\_\_

- Iodine \_\_\_\_\_
- Xenon \_\_\_\_\_

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

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

- Barium \_\_\_\_\_
- Carbon \_\_\_\_\_
- Fluorine \_\_\_\_\_
- Europium \_\_\_\_\_

- Bismuth \_\_\_\_\_
- Hydrogen \_\_\_\_\_
- Magnesium \_\_\_\_\_
- Mercury \_\_\_\_\_