

Atomic Structure Worksheet

Name: _____

Period: _____

1. Name the three particles of the atom and 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 _____ of an 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 total number of protons and neutrons in the _____ of the atom.
5. 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 _____.
6. Give the symbol and number of protons in one atom of:

Lithium _____	Bromine _____
Iron _____	Copper _____
Oxygen _____	Mercury _____
Arsenic _____	Helium _____
7. Give the symbol and number of electrons in a neutral atom of:

Uranium _____	Chlorine _____
Boron _____	Iodine _____
Antimony _____	Argon _____
8. Name the element which has the following numbers of particles. Be specific. (Include charges and mass numbers where possible.)

26 electrons, 29 neutrons, 26 protons _____

53 protons, 74 neutrons _____

2 electrons (neutral atom) _____

20 protons _____

86 electrons, 125 neutrons, 82 protons (charged atom) _____

0 neutrons _____

9. If you know **ONLY** the following information can you always determine what the element is? (Yes/No).

number of protons _____

number of neutrons _____

number of electrons in a neutral atom _____

number of electrons _____