

PARTS OF AN ATOM

Name _____

An atom is made up of protons and neutrons which are in the nucleus, and electrons which are in the electron cloud surrounding the atom.

The atomic number equals the number of protons. The electrons in a neutral atom equal the number of protons. The mass number equals the sum of the protons and neutrons.

The charge indicates the number of electrons that have been lost or gained. A positive charge indicates the number of electrons (which are negatively charged) lost.

A negative charge indicates the number of electrons gained.

This structure can be written as part of a chemical symbol.

Example:

$\begin{array}{c} \text{mass} \\ \text{number} \\ \downarrow \\ {}^{12}\text{C}^{+4} \\ \uparrow \\ \text{atomic} \\ \text{number} \end{array}$

charge

This carbon ion would have 6 protons, 6 neutrons and 2 electrons.

Complete the following chart.

Element/ Ion	Atomic Number	Mass Number	Charge	Protons	Neutrons	Electrons
${}^{24}_{12}\text{Mg}$						
${}^{39}_{19}\text{K}$						
${}^{23}_{11}\text{Na}^{+1}$						
${}^{19}_{9}\text{F}^{-1}$						
${}^{27}_{13}\text{Al}^{+3}$						
${}^1_1\text{H}$						
${}^{24}\text{Mg}^{2+}$						
Ag						
S^{-2}						
${}^2_1\text{H}$						
${}^{35}\text{Cl}^{-}$						
Be^{2+}						

BOHR MODELS

Name _____

Draw Bohr models of the following atoms.

