

## Chapter 7 – Bohr Model Lesson number 1

### Bohr Model and Electron Shells

Atomic number: The number of protons in the nucleus of an atom.

Mass number: Number of protons + neutrons in a nucleus  
(Not on periodic table)

Isotopes: Atoms with a different number of neutrons compared to most atoms of the element.

Number of electrons in a neutral atom

= the number of protons = atomic number

(Note: ions are not quite the same)

Average atomic mass (aka atomic weight)

≠ Mass Number

= average mass of all atoms of the element.

("aka" = "also known as")

(listed on the periodic table)

### Electron Shells

- Row = # of electron shells
- Column = # of electrons in the shell
- Valence Shell = outermost shell (highest energy level)

valence shell  
= outer energy shell

12 protons  
12 neutrons

nucleus : Magnesium

Mg-24 = magnesium atom with a mass number of 24

$$\#p + \#n = 24$$

$$12 + \#n = 24$$

∴  $\#n = 12$

(therefore)

# of electrons : 12