Atomic Structure Notes

# Mass Number

* Sum of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the nucleus of an atom.
* Always a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* not on the periodic table
* # of neutrons =

# Isotopes

* Atoms of the same element with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Nuclear symbol
* Hyphen notation:

Example: Chlorine - 37

* atomic #
* mass #
* # of protons
* # of electrons
* # of neutrons

Relative Atomic Mass

* 12C atom =
* atomic mass unit \_\_\_\_\_\_\_\_\_\_
* 1 amu = 1/12 the mass of a 12C atom
* 1 p =
* 1 n=
* 1 e-=

**Average Atomic Mass**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of all isotopes
* on the periodic table
* round to two decimal places

Formula:

* EX: Calculate the avg. atomic mass of oxygen if its abundance in nature is 99.76% 16O, 0.04% 17O, and 0.20% 18O.
* EX: Find chlorine’s average atomic mass if approximately 8 of every 10 atoms are chlorine-35 and 2 are chlorine-37.

Ions:

* Ions are atoms with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Result from difference in number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Symbol shows charge - ex.Na+
* Equal # of protons and e- = neutral
* Extra e- = negative, Too few e- = positive