



Atomic Weight
 - the average weight of the element + all of its isotopes
 (Isotope - atoms of the same element with different #'s of neutrons)
 $^{12}_6\text{C} + ^{14}_6\text{C}$

Atomic Number

- # p
- identifies the element
- modern PTE is set up based on the Atomic Number (H.G.J. Moseley)
- if neutral #p = #e

Mass Number:

- #p + #n

$^{14}_6\text{C}$ ← mass number → $^{12}_6\text{C}$
 (when using the PTE - round the atomic weight to find the mass number)

Mass #
- Atomic #
<u> </u>
neutrons

Protons:

- found in nucleus
- positively charged
- identifies the element

Electron-

- found outside the nucleus - in shells, electron clouds, orbitals
- negatively charged
- determine the chemical reactivity + properties of an element

Neutrons:

- found in the nucleus
- neutral (no charge)
- = "glue" that allows the protons to exist closely in the nucleus

Valence Electrons - outermost e-
 ** only e- involved in chemical Rx