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Atom: The smallest part of an element that is representative of that element.
 - a neutral particle, made up of nucleus (protons, neutrons) with electrons in orbits. # electrons = # protons.

Electron: A small negatively charged subatomic particle.
 e^-
 - Has a very small mass. (10^{-31} kg)
 - Has a specific energy.

Nucleus: The central region of an atom that contains protons & neutrons.
 - has most of the mass & all the positive charge.

Proton: A positively charged subatomic particle found in the nucleus that has most of the mass of an atom.
 p^+
 mass = 1.67×10^{-27} kg

Neutron: Uncharged subatomic particle found in the nucleus.
 n^0

Atomic Number: The charge is the number for an element believed to be the # of protons.
 Z Fe

Mass Number: Represents the # of protons + neutrons.
 On the periodic table this is an average.
 Fe 55.85

Example Atom - Carbon (C) $6C^{0.01} \rightarrow 6C^{12}$
 6 protons
 6 neutrons
 6 electrons in the balanced state.

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