

# Chapter 3 - Lesson 1 (pages 72 - 79 )

What is an atom?

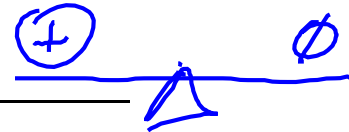


1. What does the word "atomos" mean? UNCUTTABLE

2. *We will skip this question for now!*

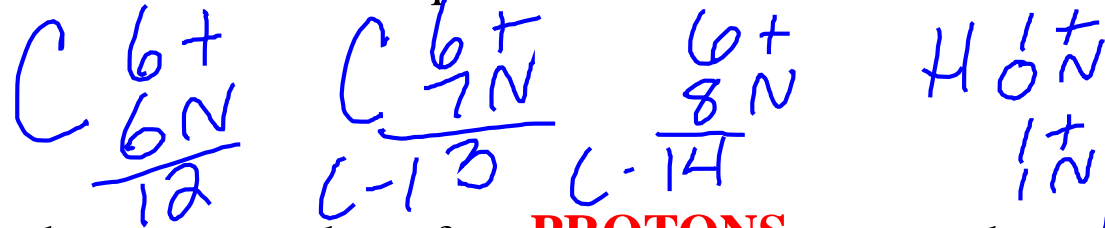


3. What charge does each particle have? Proton = + Electron = - Neutron = 0



4. Which has more mass: protons or electrons? PROTONS

5. The atomic NUMBER tells us the number of protons in the nucleus of an atom, while the mass number tells us the number of protons and NEUTRONS in the nucleus.



6. Complete these statements:

Atoms of the same element have the same number of PROTONS, such as every carbon atom has 6.

Atoms with different numbers of neutrons are called ISOTOPES. For example, Carbon-12 atoms have 6 neutrons, Carbon-13 atoms have 7 neutrons, and Carbon-14 atoms have 8 neutrons.

1. D Elements are made of atoms that cannot be divided.
2. R Used gold foil to show that the positive charges in an atom must be in a tiny region in its center
3. T Found that atoms contain positively and negatively charged particles
4. T Suggested that atoms had negatively charged electrons embedded in a positive sphere, such as raisins in a muffin
5. B Model resembled planets orbiting the sun or layers of an onion
6. D Thought that atoms of one element could not be changed into atoms of another element
7. R Determined that nearly all an atom's mass is located in the nucleus
8. B Showed that electrons had only specific amounts of energy which allowed them to move in certain orbits
9. R Used the term protons to refer to the positively charged particles found in the nucleus of an atom
10. C Lower energy levels are found near the nucleus with higher energy levels further away
11. C Determined that electrons are found in energy levels around the nucleus
12. M Atoms contain a neutral particle called a neutron

