

## HW 2

1. How many protons and neutrons are in the nucleus of oxygen  $^{16}_8\text{O}$ ?
2. How many protons, neutrons and electrons are the nucleus of boron  $^{11}_5\text{B}$ ?
3. There are 20 protons and 20 neutrons in the calcium atom. What is the charge of calcium with 18 electrons? Write down the symbol of this ion.
4. What is the relative atomic mass of the element 51Sb if it has two isotopes:  $^{121}_{51}\text{Sb}$  (atomic mass 120.9) – natural abundance 57.4% and  $^{123}_{51}\text{Sb}$  (atomic mass 122.9) – natural abundance 42.7%.
5. \*The atomic mass of natural copper is 63.5. It is composed of two isotopes:  $^{63}\text{Cu}$  and  $^{65}\text{Cu}$ . What is the abundance of each of these isotopes? What are their nuclei compositions (how many protons and neutrons)?