Isotope Practice Worksheet Name:

1. Here are three isotopes of an element: $_{6}^{12}C$ $_{6}^{13}C$ $_{6}^{14}C$
   a. The element is: _____
   b. The number 6 refers to the _____
   c. The numbers 12, 13, and 14 refer to the _____
   d. How many protons and neutrons are in the first isotope? _____
   e. How many protons and neutrons are in the second isotope? _____
   f. How many protons and neutrons are in the third isotope? _____

2. Complete the following chart:

Isotope name	atomic #	mass #	# of protons	# of neutrons	# of electrons
92 uranium-235					
92 uranium-238					
5 boron-10					
5 boron-11					

Isotope Questions:

1. Naturally occurring europium (Eu) consists of two isotopes was a mass of 151 and 153. Europium-151 has an abundance of 48.03% and Europium-153 has an abundance of 51.97%. What is the atomic mass of europium?
2. Strontium consists of four isotopes with masses of 84 (abundance 0.50%), 86 (abundance of 9.9%), 87 (abundance of 7.0%), and 88 (abundance of 82.6%). Calculate the atomic mass of strontium.
3. Hydrogen is found primarily as two isotopes in nature. $^{1}_{1}H$ (1.0078 u) and $^{2}_{1}H$ (2.0148 u). Calculate the percentage abundance of each isotope based on hydrogen's average atomic mass.
4. Lanthanium is composed of two isotopes $^{138}_{57}La$ (137.91 u) and $^{139}_{57}La$ (138.91 u). Look at the periodic table. What can you say about the abundance of $^{138}_{57}La$?
5. Rubidium ignites spontaneously when exposed to oxygen to form rubidium oxide, Rb_2O. Rubidium exists as two isotopes: $^{85}_{37}Rb$ (84.91 u) and $^{87}_{37}Rb$ (86.91 u). If the average atomic mass of rubidium is 85.47 u determine the percentage abundance of $^{85}_{37}Rb$?
6. Oxygen is composed of three isotopes $^{16}_{8}O$ (15.995 u), $^{17}_{8}O$ (16.999 u) and $^{18}_{8}O$ (17.999 u). One of these isotopes, $^{17}_{8}O$, comprises of 0.04% of oxygen. Calculate the percentage abundance of the other two isotopes, using the average atomic mass of 15.9994 u.