

**Isotope Practice Worksheet**

Name: \_\_\_\_\_

**Learning Target:** Use isotope notation to determine: element name/symbol, atomic number, number of electrons, number of neutrons, number of protons, mass number, atomic number, atomic mass.  
Isotope Notation:

1. Here are three isotopes of an element:  ${}_6^{12}\text{C}$        ${}_6^{13}\text{C}$        ${}_6^{14}\text{C}$ 
  - 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					

3. 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?

Element	Symbol	Atomic Number	Number of electrons	Number of Neutrons	Mass number	Isotope Notation	Atomic Mass
Helium			2	2			
	Ti		22		50		Ti - 50
		73	68	108			
Gallium			28	39			
						${}_6^{13}\text{C}^{-4}$	
						${}_{88}^{226}\text{Ra}$	
		83	83	127			