

Isotope Practice

1. Here are three isotopes of an element: ${}_6^{12}\text{C}$ ${}_6^{13}\text{C}$ ${}_6^{14}\text{C}$
- The element is: _____
 - The number 6 refers to the _____
 - The numbers 12, 13, and 14 refer to the _____
 - How many protons and neutrons are in the first isotope? _____
 - How many protons and neutrons are in the second isotope? _____
 - How many protons and neutrons are in the third isotope? _____

2. Copy and Complete the following chart:

Isotope name	atomic #	mass #	# of protons	# of neutrons	# of electrons
Potassium-37					
Oxygen-17					
uranium-235					
uranium-238					
boron-10					
boron-11					

DIRECTIONS: Please answer the following problems in your interactive notebook, show your work!

- Naturally occurring europium (Eu) consists of two isotopes with 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?
- 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.
- Calculate the atomic mass of copper if copper-63 is 69.17% abundant and copper-65 is 30.83% abundant.
- Lithium-6 is 4% abundant and lithium-7 is 96% abundant. What is the average mass of lithium?

7. Iodine is 80% ^{127}I , 17% ^{126}I , and 3% ^{128}I . Calculate the average atomic mass of iodine.
8. The natural abundance for boron isotopes is 19.9% ^{10}B and 80.1% ^{11}B . Calculate boron's atomic mass.
9. Hydrogen is 99% ^1H , 0.8% ^2H , and 0.2% ^3H . Calculate its average atomic mass.
10. Rubidium is a soft, silvery-white metal that has two common isotopes, ^{85}Rb and ^{87}Rb . If the abundance of ^{85}Rb is 80.2% and the abundance of ^{87}Rb is 19.8%, what is the average atomic mass of rubidium?
11. What is the atomic mass of hafnium if, out of every 100 atoms, 5 have a mass of 176, 19 have a mass of 177, 27 have a mass of 178, 14 have a mass of 179, and 35 have a mass of 180.0?