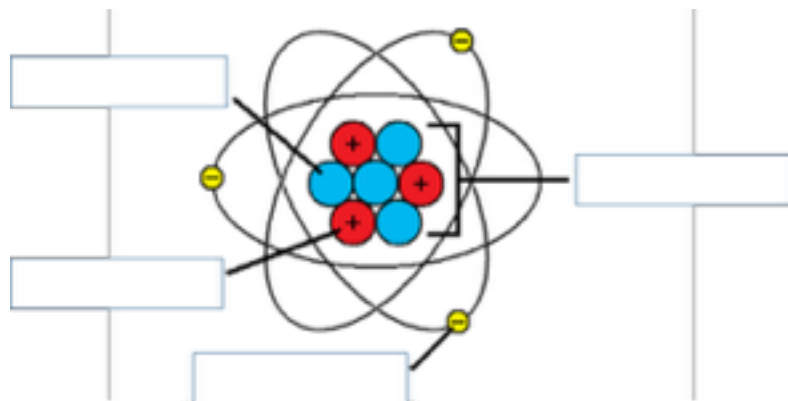


Class 1.3 Date: _____

Counting Subatomic Particles using Mass Number

Definitions

- i. Atomic Number
- ii. Element
- iii. Mass Number



Example 1: How many _____ are in an atom of Carbon if the mass number is _____? According to Periodic Table, Carbon's atomic number is _____. This is equal to the number of _____.

Example 2: Identify the element that has an atom with a mass number of _____ and _____ neutrons.

Nuclear Symbols are a quick and easy way to record the element, number protons, and mass numbers.

100

51

S

The top left hand number represents the _____

The bottom left hand number represents the _____

What are the nuclear symbols for examples 1 and 2 on the front of this worksheet?

Example 1:

Example 2:

Practice

Directions Individually, or in your groups, complete the following chart and questions

Element	Atomic Symbol	Atomic Number	Number of Protons	Number of Neutrons	Mass Number	Nuclear Symbol
Hydrogen					3	
	N			8		
			15		32	
		5		6		
Boron					10	

- Determine the total number of neutrons in an atom of Si with a mass of 29amu.
Show your work for full credit.
- The nucleus of an atom of Gold-198 has _____ protons and _____ neutrons.
- What is the mass number of an atom with 7 protons, 8 neutrons, and 7 electrons?
- State, in terms of subatomic particles (protons, neutrons, & electrons), how an atom of Carbon with a mass of 13amu is different from an atom of Carbon with a mass of 12amu.

Isotopes

In other words, atoms with the same number of _____, but with a different number of _____.