

Topic Reminder Q2
Atomic structure
#2-1

A13

Fill out chart below.

Name	Symbol	Atomic #	Neutrons	Mass #	charge	Electrons
Boron	B	5	4	9	-1	6
Phosphorus	P	53	60		-1	
Germanium	Ge	32	30	62	0	32
Phosphorus	P	15	15	30	0	15

1. Compare and contrast the following terms: Ion and Isotope?

$p^+ \neq e^-$ ↑ ↘ Some element / different # Neutrons

Atom description	hyphen notation	nuclear symbol	Isotope of atom described, hyphen notation	Isotope of atom described, nuclear symbol
atomic number = 6 mass number = 14	C-14	$^{14}_6\text{C}$	C-12 or C-13	$^{12}_6\text{C}$ or $^{13}_6\text{C}$
atomic number = 1 mass number = 1	H-1	^1_1H	H-2	^2_1H
mass number = 207 protons = 92	U-207	$^{207}_{92}\text{U}$	U-208	$^{208}_{92}\text{U}$
atomic number = 7 neutrons = 8	O-15	$^{15}_8\text{O}$	O-16	$^{16}_8\text{O}$
protons = 2 neutrons = 2	He-4	^4_2He	H-2	^2_2He

2. Student hypothesis: The mass number of Li = 6.94 amu.

- How many protons?
- How many neutrons?
- Is students hypothesis correct?

These answers can be different than yours. Just change # of Protons Neutrons.

Nullify
Atom must have whole #
 $p^+ \rightarrow 3$
 $n \rightarrow 4$
either 6 or 7 Not between.

6.94 is average atomic weight NOT mass #