

Atomic Number, Mass Number, Average Atomic Mass

1.

Element	Atomic Number	Protons	Neutrons	Electrons	Mass Number
Ge					73
		25	30		
	39		50		
				75	186
			70	51	
Cr			28		
Cr			29		
		86			222

2. Which is more abundant? S-32 (95%), S-34 (4%)

The average atomic mass is the weighted average of all the isotopes of an ELEMENT

2. Calculate the average atomic mass of Nitrogen if the two known isotopes have the following abundances:

- A) Nitrogen-14 (Mass = 14.003 amu): 99.63%
- B) Nitrogen-15 (Mass = 15.000 amu): 0.37%

4. Calculate the average atomic mass of the mixtures of isotopes.

- A. 50% <sup>197</sup>Au, 50% <sup>198</sup>Au
- B. 15% <sup>55</sup>Fe, 85% <sup>56</sup>Fe

Symbol	# of neutrons	# of protons	# of electrons
${}^2\text{H}$			
${}^{14}\text{C}$			
${}^{14}\text{N}$			
	2	1	
	7	6	
${}^{39}\text{K}$			
	21	19	
${}^{40}\text{Ca}$			
${}^{207}\text{Pb}$			
		82	
		92	
${}^{238}\text{U}$			