ISOTOPE WORKSHEET KEY

Complete the following table.

Symbol of isotope	Number of protons	Number of neutrons	Number of electrons	Atomic number	Mass number
$^{35}_{17}Cl$	**17**	**18**	**17**	**17**	**35**
$^{34}_{16}S$	**16**	**18**	**16**	**16**	**34**
$^{209}_{83}Bi^{3+}$	83	**126**	80	**83**	209
$^{115}_{49}In$	49	66	**49**	**49**	115
$^{197}_{79}Au^{+}$	79	118	78	79	**197**

CHEMISTRY 151 - ISOTOPE SYMBOLISM KEY

Complete the following table.

Symbol	Atomic number	Mass number	Number of protons	Number of neutrons	Number of electrons
$^{59}_{27}Co$	**27**	**59**	**27**	**32**	**27**
$^{27}_{12}Mg^{2+}$	**12**	**27**	**12**	**15**	**10**
$^{31}_{15}P^{3-}$	**15**	**31**	**15**	**16**	**18**
$^{190}_{76}Os$	76	190	**76**	**114**	76
$^{238}_{92}U$	**92**	**238**	92	146	92
$^{45}_{21}Sc^{3+}$	**21**	45	21	**24**	18

CHEMISTRY 151 - ATOMIC MASSES KEY

Naturally occurring iron consists of 5.82% iron-54 with atoms of mass 53.940 u, 91.66% iron-56 with atoms of mass 55.935 u, 2.19% iron-57 with atoms of mass 56.935 u, and 0.33% iron-58 with atoms of mass 57.933 u. Calculate iron's atomic mass.

atomic mass = 0.0582(53.940) + 0.9166(55.935) + 0.0219(56.935) + 0.0033(57.933)

= 3.14 + 51.27 + 1.25 + 0.19 = **55.85 u**