

Metals tend to lose electrons to form positive ionic charges.

Non-metals tend to gain electrons to form negative ions called ANIONS.

Thus the Octet Rule states that atoms tend to gain or lose electrons to form stable ions. The most stable have a full outer shell containing 8 valence electrons.

Complete the following chart:

Element or Ion	Atomic Number	Mass Number	Protons	Neutrons	Electrons
${}^1_1\text{H}$	1	1	1	0	1
${}^1_1\text{H}^+$	1	1	1	0	0
${}^6_3\text{Li}$	3	7	3	4	3
${}^6_3\text{Li}^+$	6	7	6	6	6
${}^{56}_{26}\text{Fe}^{2+}$	26	56	26	30	24
${}^{16}_8\text{O}^{2-}$	8	16	8	8	10
${}^{16}_8\text{O}$	8	16	8	8	8
${}^{14}_7\text{N}$	7	14	7	7	7
${}^{32}_{16}\text{S}^{2-}$	16	32	16	16	18
${}^{47}_{21}\text{Sc}^{3+}$	21	47	21	26	18
${}^{47}_{21}\text{Sc}$	21	47	21	26	21
${}^{15}_7\text{N}^{3-}$	7	15	7	8	10
${}^{13}_6\text{C}^{4-}$	6	13	6	7	10
${}^{14}_7\text{N}$	7	14	7	7	7
${}^{28}_{14}\text{Si}$	14	28	14	14	14
${}^{40}_{20}\text{Ca}^{2+}$	20	40	20	20	18
${}^{40}_{20}\text{Ca}$	20	40	20	20	20
${}^{50}_{25}\text{Mn}^{2+}$	25	50	25	25	23
${}^{50}_{25}\text{Mn}$	25	50	25	25	25
${}^{39}_{19}\text{K}^{+}$	19	39	19	20	18