

Octet Rule for Main Group Elements

	H Li Na K Rb Cs Fr	Be Mg Ca Sr Ba Ra	B Al Ga In Tl	C Si Ge Sn Pb	N P As Sb Bi	O S Se Te Po	F Cl Br I At	He Ne Ar Kr Xe Rn	
simplified e^{-} config in valence shell	s^1	s^2	s^2p^1	s^2p^1	s^2p^3	s^2p^4	s^2p^5	s^2p^6	
# of e^{-} in valence shell	1	2	3	4	5	6	7	8	
# of e^{-} lost during reaction	1	2	3	4	/	/	/	/	
# of e^{-} gained during reaction	/	/	/	/	4	3	2	1	0
# of e^{-} remaining in original valence shell	0	0	0	0	8	8	8	8	8
# of e^{-} in outermost occupied shell (may be a new valence)	8	8	8	8	8	8	8	8	
simplified e^{-} config in outermost shell after reaction	s^2p^6	s^2p^6	s^2p^6	s^2p^6	s^2p^6	s^2p^6	s^2p^6	s^2p^6	

An octet of electrons has a stable quantum mechanical wave pattern that has the electron configuration of s^2p^6 (eight is great ☺)