

Chemistry
Electron Practice

Name _____
Date _____

KEY

Complete the table to practice concepts from Chapter 5 – Electrons in Atoms and Chapter 6 – Periodic Table

Element	Family Name	Electron Configuration	Shorthand Configuration	Valence Electrons	Lewis Dot Structure	Lose or Gain Electrons?	Cation or Anion?	Ion Charge
Fluorine	Halogen	$1s^2 2s^2 2p^5$	$[He] 2s^2 2p^5$	7	$\cdot\ddot{F}\cdot$	Gain $1e^-$	Anion	1^-
Neon	Noble Gas	$1s^2 2s^2 2p^6$	$[He] 2s^2 2p^6$	8	$\cdot\ddot{Ne}\cdot$	N/A	N/A	N/A
Calcium	Alkaline Earth	$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2$	$[Ar] 4s^2$	2	\ddot{Ca}	Lose $2e^-$	Cation	2^+
Iron	Transition	$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^6$	$[Ar] 4s^2 3d^6$	Technically 2	\ddot{Fe}	Lose $2e^-$ (4s) Lose $3e^-$ (4s ² 3d)	Cation	2^+ 3^+
Phosphorus	5A	$1s^2 2s^2 2p^6 3s^2 3p^3$	$[Ne] 3s^2 3p^3$	5	$\cdot\ddot{P}\cdot$	Gain $3e^-$	Anion	3^-
Lithium	Alkali	$1s^2 2s^1$	$[He] 2s^1$	1	$\overset{\circ}{Li}$	Lose $1e^-$	Cation	1^+
Zirconium	Transition	$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^2$	$[Kr] 5s^2$	Technically 2	\ddot{Zr}	Lose $2e^-$ (5s) Lose $4e^-$ (5s ² 4d ²)	Cation	2^+ 4^+
Astatine	Metalloid Halogen	$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^6 6s^2 4f^{14} 5d^{10} 6p^5$	$[Xe] 6s^2 6p^5$	7	$\cdot\ddot{At}\cdot$	Gain $1e^-$	Anion	1^-
Helium	Noble Gas	$1s^2$	N/A	2	\ddot{He}	N/A	N/A	N/A
Strontium	Alkaline Earth	$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2$	$[Kr] 5s^2$	2	\ddot{Sr}	Lose $2e^-$	Cation	2^+