

Chemistry

Name: Key

Electron Configuration and Orbital Diagrams

U4M4 Practice WS - Advanced

Section I: Elements

Element	Long Form Electron Configuration	Noble gas abbreviated configuration	# Valence Electrons
Hydrogen	$1s^1$	N/A	1
Helium	$1s^2$	N/A	2
Lithium	$1s^2 2s^1$	$[\text{He}] 2s^1$	1
Beryllium	$1s^2 2s^2$	$[\text{He}] 2s^2$	2
Boron	$1s^2 2s^2 2p^1$	$[\text{He}] 2s^2 2p^1$	3
Carbon	$1s^2 2s^2 2p^2$	$[\text{He}] 2s^2 2p^2$	4
Nitrogen	$1s^2 2s^2 2p^3$	$[\text{He}] 2s^2 2p^3$	5
Oxygen	$1s^2 2s^2 2p^4$	$[\text{He}] 2s^2 2p^4$	6
Fluorine	$1s^2 2s^2 2p^5$	$[\text{He}] 2s^2 2p^5$	7
Neon	$1s^2 2s^2 2p^6$	$[\text{He}] 2s^2 2p^6$	8
Iron	$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^6$	$[\text{Ar}] 4s^2 3d^6$	2
Cadmium	$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10}$	$[\text{Kr}] 5s^2 4d^{10}$	2
Zirconium	$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^2$	$[\text{Kr}] 5s^2 4d^2$	2
Bromine	$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^5$	$[\text{Ar}] 4s^2 3d^{10} 4p^5$	7
Antimony	$1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^3$	$[\text{Kr}] 5s^2 4d^{10} 5p^3$	5