NAME:_____ **SECTION:**_____

Electron Configurations

Write the complete (expanded) electron configurations and core (noble gas) electron configurations for the following elements. Use only this periodic table for reference.

Group 1(1A) – Alkali Metals

Element	Expanded Electron Configuration	Core Notation
H		**Not for this one**
Li		
Na		
K		
Rb		
Cs		
Fr		

NAME:_____ **SECTION:**_____

Group 2(2A) – Alkaline Earth Metals

Element	Expanded Electron Configuration	Core Notation
Be		
Mg		
Ca		
Sr		
Ba		
Ra		

Group 13(3A)

Element	Expanded Electron Configuration	Core Notation
B		
Al		
Ga		
In		
Tl		

NAME:_____ **SECTION:**_____

Group 14(4A)

Element	Expanded Electron Configuration	Core Notation
C		
Si		
Ge		
Sn		
Pb		

Group 15 (5A)

Element	Expanded Electron Configuration	Core Notation
N		
P		
As		
Sb		
Bi		

NAME:_____ **SECTION:**_____

Group 16 (6A)

Element	Expanded Electron Configuration	Core Notation
O		
S		
Se		
Te		
Po		

Group 17(7A) - Halogens

Element	Expanded Electron Configuration	Core Notation
F		
Cl		
Br		
I		
At		

NAME:_____ **SECTION:**_____

Group 18(8A) — Noble Gases

Element	Expanded Electron Configuration	Core Notation
He		**Not for this one**
Ne		
Ar		
Kr		
Xe		
Rn		

NAME:_____ **SECTION:**_____

Period 4 Transition Elements

Element	Expanded Electron Configuration	Core Notation
Sc		
Ti		
V		
Cr		
Mn		
Fe		
Co		
Ni		
Cu		
Zn		

NAME:_____ **SECTION:**_____

Period 5 Transition Elements

Element	Expanded Electron Configuration	Core Notation
Y		
Zr		
Nb		
Mo		
Tc		
Ru		
Rh		
Pd		
Ag		
Cd		

NAME:_____ **SECTION:**_____

+1 Cations

Remember, when forming cations always take electrons out of the highest occupied "n" orbital first!

Element	Expanded Electron Configuration	Core Notation
H^+		**Not for this one**
Li^+		**Not for this one**
Na^+		
K^+		
Rb^+		
Cs^+		
Fr^+		
Ga^+		
Cu^+		
Ag^+		
Tl^+		

NAME:_____ **SECTION:**_____

+2 Cations

Remember, when forming cations always take electrons out of the highest occupied "n" orbital first!

Element	Expanded Electron Configuration	Core Notation
Be^{2+}		**Not for this one**
Mg^{2+}		
Ca^{2+}		
Sr^{2+}		
Ba^{2+}		
Ra^{2+}		
Fe^{2+}		
Cu^{2+}		
Zn^{2+}		
Cd^{2+}		

NAME:_____ **SECTION:**_____

+3 Cations

Remember, when forming cations always take electrons out of the highest occupied "n" orbital first!

Element	Expanded Electron Configuration	Core Notation
B^{3+}		**Not for this one**
Al^{3+}		
Ga^{3+}		
Sc^{3+}		
Cr^{3+}		
Fe^{3+}		

NAME:_____ **SECTION:**_____

-1 Anions

Element	Expanded Electron Configuration	Core Notation
H^-		
F^-		
Cl^-		
Br^-		
I^-		
At^-		

-2 Anions

Element	Expanded Electron Configuration	Core Notation
O^{2-}		
S^{2-}		
Se^{2-}		
Te^{2-}		
Po^{2-}		

NAME:_____ **SECTION:**_____

-3 Anions

Element	Expanded Electron Configuration	Core Notation
N^{3-}		
P^{3-}		
As^{3-}		