Chemistry 11

Electron Configuration Worksheet 2

Name: Key
Date:
Block:

Write the **full** electron configuration of the following elements:

1. Na^+ $1s^2 2s^2 2p^6$
2. Fe^{2+} $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^6$
3. O^{2-} $1s^2 2s^2 2p^6$
4. Cr $1s^2 2s^2 2p^6 3s^2 3p^6 4s^1 3d^5$
5. Cu $1s^2 2s^2 2p^6 3s^2 3p^6 4s^1 3d^{10}$

Write the electron configuration of the following elements, using **core notation**:

1. Ag^+ $[Kr] 5s^1 4d^{10} \rightarrow [Kr] 4d^{10}$
2. Se^{2-} $[Ar] 4s^2 3d^{10} 4p^6$
3. Mo $[Kr] 5s^1 4d^5$
4. Ba^{2+} $[Kr] 5s^2 4d^{10} 5p^6$
5. Sm $[Xe] 6s^2 4f^6$

Fill in the following table, using **core notation**.

Ion	Electron Configuration	Orbital Diagram
P^{3-}	$[Ne] 3s^2 3p^6$	[Ne] 3s: ↿⇂ 3p: ↿ ↿ ↿
Rb^+	$[Ar] 4s^2 3d^{10} 4p^6$	[Ar] 4s: ↿⇂ 3d: ↿ ↿ ↿ ↿ ↿ 4p: ↿ ↿ ↿
Ni^{4+}	$[Ar] 4s^1 3d^5$	[Ar] 4s: ↿ 3d: ↿ ↿ ↿ ↿ ↿
W^{6+}	$[Xe] 4f^{14}$	[Xe] 4f: ↿⇂ ↿⇂ ↿⇂ ↿⇂ ↿⇂ ↿⇂ ↿⇂