

Electron Configuration Worksheet 2

Name: *Key*
Date:
Block:

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

1. Ag⁺ $[\text{Kr}] 5s^1 4d^{10} \rightarrow [\text{Kr}] 4d^{10}$
2. Se²⁻ $[\text{Ar}] 4s^2 3d^{10} 4p^6$
3. Mo $[\text{Kr}] 5s^1 4d^5$
4. Ba²⁺ $[\text{Kr}] 5s^2 4d^{10} 5p^6$
5. Sm $[\text{Xe}] 6s^2 4f^6$

Ion	Electron Configuration	Orbital Diagram
P ³⁻	$[\text{Ne}] 3s^2 3p^6$	$[\text{Ne}] \begin{array}{c} \uparrow\downarrow \\ 3s \end{array} \quad \begin{array}{c} \uparrow\downarrow \uparrow\downarrow \uparrow\downarrow \\ 3p \end{array}$
Rb ⁺	$[\text{Ar}] 4s^2 3d^{10} 4p^6$	$[\text{Ar}] \begin{array}{c} \uparrow\downarrow \\ 4s \end{array} \quad \begin{array}{c} \uparrow\downarrow \uparrow\downarrow \uparrow\downarrow \uparrow\downarrow \uparrow\downarrow \uparrow\downarrow \\ 3d \end{array} \quad \begin{array}{c} \uparrow\downarrow \uparrow\downarrow \uparrow\downarrow \\ 4p \end{array}$
Ni ⁴⁺	$[\text{Ar}] 3d^6$	$[\text{Ar}] \begin{array}{c} \uparrow\downarrow \uparrow \uparrow \uparrow \uparrow \\ 3d \end{array}$
W ⁶⁺	$[\text{Xe}] 4f^{14}$	$[\text{Xe}] \begin{array}{c} \uparrow\downarrow \uparrow\downarrow \uparrow\downarrow \uparrow\downarrow \uparrow\downarrow \uparrow\downarrow \uparrow\downarrow \\ 4f \end{array}$