

Electron Configuration Worksheet - KEY

Work as teams to do the following electron configurations. Make sure to discuss your choices with each other, so that everyone will be able to clearly understand how this is done.

Afterwards, write the abbreviated version using the noble gases as the base.

1. Ag (atomic # 47) – $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^9$
 - [Kr] $5s^2 4d^9$
2. Ca (atomic # 20) – $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2$
 - [Ar] $4s^2$
3. Cl (atomic # 17) - $1s^2 2s^2 2p^6 3s^2 3p^5$
 - [Ne] $3s^2 3p^5$
4. Mg (atomic # 12) – $1s^2 2s^2 2p^6 3s^2$
 - [Ne] $3s^2$
5. Ar (atomic # 18) - $1s^2 2s^2 2p^6 3s^2 3p^6$
 - [Ar]
6. Hg (atomic # 80) - $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^6 6s^2 5d^{10}$
 - [Xe] $6s^2 5d^{10}$
7. Fe (atomic # 26) - $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^6$
 - [Ar] $4s^2 3d^6$
8. I (atomic # 53) - $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^5$
 - [Kr] $5s^2 4d^{10} 5p^5$
9. He (atomic # 2) - $1s^2$
 - [He]
10. Sn (atomic # 50) - $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^2$
 - [Kr] $5s^2 4d^{10} 5p^2$