

Name: \_\_\_\_\_

Period: \_\_\_\_\_ Subject: \_\_\_\_\_

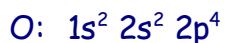
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# Electron Configuration

1. List the entire aufbau sequence of orbitals (from **1s** to **7p**).



2. Write out the electron configuration (longhand version) for the element **oxygen**.



3. Write out the electron configuration (longhand version) for the element **iron**.



4. Write out the electron configuration of **gold** using noble-gas notation (the shorthand method).



5. Write out the electron configuration of **praseodymium** (element #59) using noble-gas notation.



6. Which element has the electron notation  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^2$ ?

**zirconium**

7. Which element has the electron configuration  $[Kr] 5s^2 4d^2$ ?

**zirconium**

8. Name an ion with the electron configuration  $1s^2 2s^2 2p^6 3s^2 3p^6$ .

$P^{-3}$ ,  $S^{-2}$ ,  $Cl^-$ ,  $K^+$ ,  $Ca^{+2}$

9. Write out the electron configuration for a **bromine** ion (longhand notation).



10. Which of the following orbitals has the lowest energy level: **6s** **5d** **4f** **5p**

**5p**