

# Electron Configuration Practice Worksheet

*In the space below, write the full (unabbreviated) electron configurations of the following elements:*

- 1) sodium \_\_\_\_\_
- 2) iron \_\_\_\_\_
- 3) bromine \_\_\_\_\_
- 4) barium \_\_\_\_\_
- 5) neptunium \_\_\_\_\_

*In the space below, write the Noble Gas (abbreviated) electron configurations of the following elements:*

- 6) cobalt \_\_\_\_\_
- 7) silver \_\_\_\_\_
- 8) tellurium \_\_\_\_\_
- 9) radium \_\_\_\_\_
- 10) lawrencium \_\_\_\_\_

Determine what elements are denoted by the following electron configurations:

- 11)  $1s^2 2s^2 2p^6 3s^2 3p^4$  \_\_\_\_\_
- 12)  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^1$  \_\_\_\_\_
- 13)  $[\text{Kr}] 5s^2 4d^{10} 5p^3$  \_\_\_\_\_
- 14)  $[\text{Xe}] 6s^2 4f^{14} 5d^6$  \_\_\_\_\_
- 15)  $[\text{Rn}] 7s^2 5f^{11}$  \_\_\_\_\_

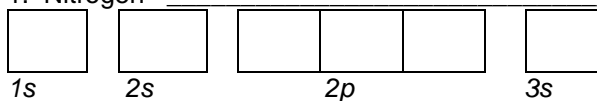
Determine which of the following electron configurations are not valid: State which rule has been violated.

- 16)  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 4p^5$  \_\_\_\_\_
- 17)  $1s^2 2s^2 2p^6 3s^3 3d^5$  \_\_\_\_\_
- 18)  $[\text{Ra}] 7s^2 5f^8$  \_\_\_\_\_
- 19)  $[\text{Kr}] 5s^2 4d^{10} 5p^5$  \_\_\_\_\_
- 20)  $[\text{Xe}]$  \_\_\_\_\_

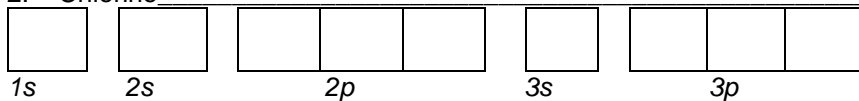
**Where are the Electrons?**

Write the full electron configuration, short-hand electron configuration, and fill in the orbital diagrams, for the following elements.

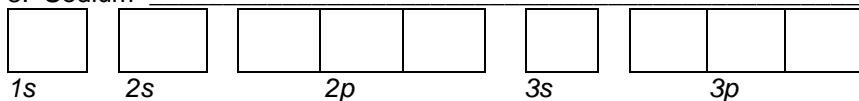
1. Nitrogen \_\_\_\_\_



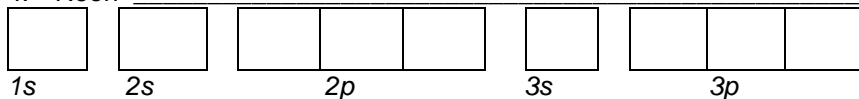
2. Chlorine \_\_\_\_\_



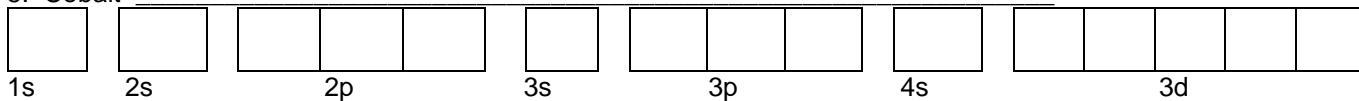
3. Sodium \_\_\_\_\_



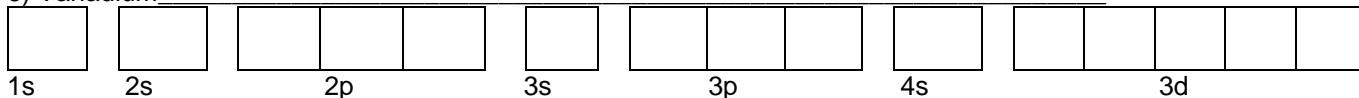
4. Neon \_\_\_\_\_



5. Cobalt \_\_\_\_\_



6) Vanadium \_\_\_\_\_



7) Copper \_\_\_\_\_

