# Electron Configuration Practice Worksheet

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

1) Sodium _____

2) iron _____

3) bromine _____

4) barium _____

5) neptunium _____

*In the space below, write the 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) [Kr] $5s^2 4d^{10} 5p^3$ _____

14) [Xe] $6s^2 4f^{14} 5d^6$ _____

15) [Rn] $7s^2 5f^{11}$ _____

Determine which of the following electron configurations are not valid:

16) $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 4p^5$ _____

17) $1s^2 2s^2 2p^6 3s^3 3d^5$ _____

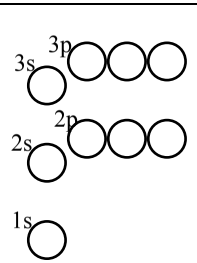
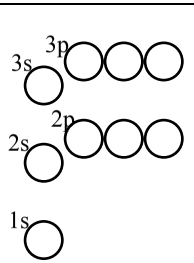
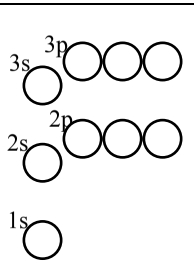
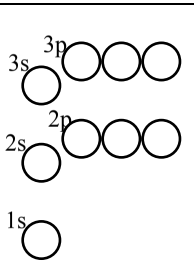
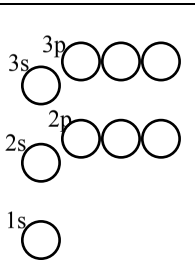
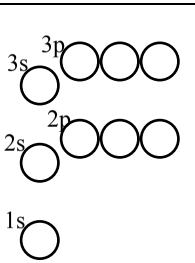
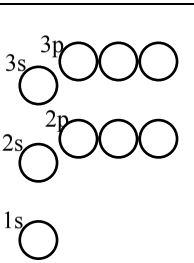
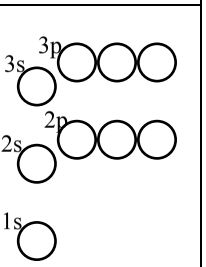
18) [Ra] $7s^2 5f^8$ _____

19) [Kr] $5s^2 4d^{10} 5p^5$ _____

20) [Xe] _____

Name _____
Period ___ Date ___/___/___

# VALENCE ELECTRONS / LEWIS STRUCTURES

| | IA | IIA | IIIA | IVA | VA | VIA | VIIA | VIIIA |
|---|---|---|---|---|---|---|---|---|
| Element | Na | Mg | Al | Si | P | S | Cl | Ar |
| Fill in Electron Config. Chart |  |  |  |  |  |  |  |  |
| Long (full) electron config. | | | | | | | | |
| Short electron config. | | | | | | | | |
| # Valence Electrons | | | | | | | | |
| Lewis Structure | | | | | | | | |

| Lewis Structures | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | H | | | | | | | He |
| | Li | Be | B | C | N | O | F | Ne |
| | Rb | Sr | In | Sn | Sb | Te | I | Xe |