

Name: _____

Electron Configuration Practice

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

- 1) magnesium _____
- 2) cobalt _____
- 3) bromine _____
- 4) phosphorous _____
- 5) nitrogen _____

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

- 6) nickel _____
- 7) sulfur _____
- 8) selenium _____
- 9) potassium _____
- 10) fluorine _____

Determine what elements are denoted by the following electron configurations:

- 11) $1s^2 2s^2 2p^6 3s^2 3p^2$ _____
- 12) $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6$ _____
- 13) $[\text{Ar}] 4s^1 3d^5$ _____
- 14) $[\text{He}] 2s^2$ _____
- 15) $[\text{Ne}] 3s^2 3p^6$ _____

Show the full electron configuration, draw the full orbital diagrams (boxes), and state how many unpaired electrons and valence electrons.

- 16) Chlorine e- configuration _____

Orbital Diagram:

Unpaired electrons = _____ Valence electrons = _____

- 17) Sodium e- configuration _____

Orbital Diagram:

Unpaired electrons = _____ Valence electrons = _____

Name:

In the space below, write the full electron configurations of the following IONS:

18) Na^+ _____

19) S^{2-} _____

20) Be^{2+} _____

21) F^- _____

22) Al^{3+} _____

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

23) Ca^{2+} _____

24) V^{2+} _____

25) V^{5+} _____

26) Co^{2+} _____

27) Mn^{2+} _____

28) If there was an element discovered with the atomic number of 119, what would the valence shell electron configuration be???