Name, Date, Hr/Per_____

Electron Configuration Practice

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

1) sodium _____

2) iron _____

3) bromine _____

4) barium _____

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

6) cobalt _____

7) silver _____

8) tellurium _____

9) radium _____

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) $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^5$ _____

15) $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 4s^2$ _____

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

Determine which of the following electron configurations are valid, and which are invalid.

17) $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 4s^2\ 4d^{10}\ 4p^5$ _____

18) $1s^2\ 2s^2\ 2p^6\ 3s^3\ 3d^5$ _____

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

20) [Xe] _____

Explain what is wrong with the following electron configurations:

21) $1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^6\ 4s^2\ 4d^{10}\ 4p^6$

22) $1s^2\ 2s^2\ 2p^6\ 3s^3\ 3d^5$

Use the following clues to identify the element. Show any figuring in the space below.

23) This element has a 3p sublevel that contains 3 electrons.

24) This element has a 4s sublevel with 2 electrons for its outermost electrons.

25) This element has 1 electron in its 3d sublevel.

26) This element has 5 electrons in its 5p sublevel

27) This element has a completely filled 3p sublevel for its outermost electrons.

28) This element has 2 electrons in its 6p sublevel.