\* Each ring around the black dot (nucleus) is a filled orbital.

## Valence Clues

The diagrams below represent various atoms in which only the valence electrons are shown. Use the diagrams to provide the missing information.

|    | ,           | S The state of the |  |                 |                  |  |
|----|-------------|--|--|-----------------|------------------|--|
|    | Element     | Number of<br>Valence<br>Electrons  | Metal,<br>Nonmetal,<br>Metalloid,<br>Noble Gas | Group<br>Number | Period<br>Number |  |
| 1. |             |  |  |                 |                  |  |
|    |             |  |  |                 |                  |  |
|    | •           |  | •  |                 |                  |  |
| 2. |             |  |  | •               | ·.               |  |
|    | -           |  |  |                 |                  |  |
| 3. |             | <del></del>  |  |                 | ·                |  |
|    |             |  |  |                 |                  |  |
|    |             | •  |  |                 |                  |  |
|    | <del></del> | · · · · · · · · · · · · · · · · · · ·  |  |                 | ·                |  |
|    | •           |  |  |                 |                  |  |
| 5. |             |  |  |                 |                  |  |
|    |             | With   |  |                 |                  |  |
| -  |             |  |  |                 |                  |  |
| 6. |             | ·  |  |                 |                  |  |
|    |             |  |  |                 |                  |  |
|    |             |  |  |                 |                  |  |
| 7. |             |  |  |                 |                  |  |
|    |             |  |  |                 |                  |  |
| 8. |             |  |  |                 |                  |  |
|    |             |  |  |                 |                  |  |