

## CHAPTER 13 REVIEW ACTIVITY

Text Reference: Section 13-10

## Writing Electron Configurations

The filling order for electrons in energy sublevels is:

1s, 2s, 2p, 3s, 3p, 4s, 3d, 4p, 5s, 4d,  
5p, 6s, 4f, 5d, 6p, 7s, 5f, 6d, 7p

Each *s* sublevel contains 1 orbital; each *p* contains 3; each *d* contains 5; and each *f* contains 7. Each orbital can contain at most 2 electrons.

An electron configuration can be written out by assigning electrons to the sublevels in the order listed, until the number of electrons assigned equals the atomic number (*N*) of the atom.

### Examples

Determine the configurations of these elements.

Beryllium (*N* = 4)       $1s^2 2s^2$

Aluminum (*N* = 13)       $1s^2 2s^2 2p^6 3s^2 3p^1$

Bromine (*N* = 35)       $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^5$

Write the electron configuration for each of the following elements.

- |                                |           |
|--------------------------------|-----------|
| 1. Calcium ( <i>N</i> = 20)    | 1. _____  |
| 2. Lithium ( <i>N</i> = 3)     | 2. _____  |
| 3. Argon ( <i>N</i> = 18)      | 3. _____  |
| 4. Iron ( <i>N</i> = 26)       | 4. _____  |
| 5. Sodium ( <i>N</i> = 11)     | 5. _____  |
| 6. Oxygen ( <i>N</i> = 8)      | 6. _____  |
| 7. Iodine ( <i>N</i> = 53)     | 7. _____  |
| 8. Dysprosium ( <i>N</i> = 66) | 8. _____  |
| 9. Radium ( <i>N</i> = 88)     | 9. _____  |
|                                | _____     |
| 10. Fermium ( <i>N</i> = 100)  | 10. _____ |
|                                | _____     |