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|  | Symbol | **Standard Electron Configuration and Noble Gas Electron Configuration** |
|  | Mg |  |
|  | P |  |
|  | V |  |
|  | Ge |  |
|  | Kr |  |
|  | Ba |  |

1. What is the Aufbau Principle?
2. How many electrons can an orbital hold? Does it change based on orbital type?
3. Arrange the following in order of increasing energy: 2p, 4s, 3s, 3d, and 3p
4. Why does the 19th electron in potassium (K) go into the 4th energy level instead of the 3rd energy level?
5. Identify what is wrong with the following standard electron configurations:
   1. 1s22s22p63s23p64s24d5
   2. 1s22s22p63p64s2
6. Identify the following elements based off their standard electron configuration:
   1. 1s22s22p63s23p64s23d5
   2. 1s22s22p63s23p64s23d104p65s2
   3. 1s22s22p63s23p64s23d104p65s24d105p66s25d2