**S-4**

**Name: Period: Seat#:**

An ion having a +4 charge and a mass of 74amu has 2 electrons with the principle quantum number (energy level) n = 1, 8 electrons with n = 2 and 18 electrons with n = 3. Supply all of the following properties for the ion. Show work to justify your answers to all parts.

1. The atomic number.
2. Total number of s electrons.
3. Total number of p electrons.
4. Total number of d electrons.
5. The number of protons, neutrons, and electrons.
6. The ground-state electron configuration of the neutral atom.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Atomic #** | **Total # s electrons** | **Total # of p electrons** | **Total # of d electrons** | **# of protons** | **# of neutrons** | **# of electrons** |
|  |  |  |  |  |  |  |
| **The ground-state electron configuration of the neutral atom** |  |