**Worksheet #1**

**Name: Period: Seat#:**

1. An orbital is:
2. What is the difference between an orbital and an orbit (Bohr Model)?
3. What are the four things we need to adequately describe where an electron is inside an atom?
4. Fill in the following chart:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Orbital Type** | **Description of Shape** | **# of orbitals in a set** | **# electrons allowed in one of the orbitals** | **# electrons allowed in a set of the orbitals** |
| s |  |  |  |  |
| p |  |  |  |  |
| d | Complex lobes |  |  |  |
| f | Even more complex |  |  |  |

1. Describe each rule for writing the “address” of an electron - in your own words! Then draw a visual representation for this rule. If we were to try and make a little classroom poster to remind us of the rule what would it look like? Think of how things like road signs and warning signs are drawn – bold pictures with minimal words.

|  |  |  |
| --- | --- | --- |
| **Rule** | **Written Description** | **Visual Representation** |
| Aufbau Principle |  |  |
| Pauli Exclusion Principle |  |  |
| Hund’s Rule |  |  |