

I. Fill in the blanks:

1. The orbital shaped like a "dumb-bell" is the _____ orbital, while the orbital shaped spherically is the _____ orbital.
2. How many sublevels are present in the third main energy level? _____
3. What is the maximum number of orbitals in the "d" sublevel? _____
4. The maximum number of electrons that can occupy an orbital is _____, provided they have _____.
5. The maximum number of electrons that can occupy an energy level is represented by the formula _____.
6. The highly probable location of an electron within the atom is a(n) _____.

II. Write the electron configuration for the following:

1. Mg: _____
2. As: _____

III. In the space below, show the orbital notation for Mg: