Quantum Numbers and Electron Configuration

CH2000: Introduction to General Chemistry, Plymouth State University

1. Briefly describe in your own terms what each of the quantum numbers mean:

   n (principle q.n.) _____

   l (angular momentum q.n.) _____

   m_l (magnetic q.n.) _____

   m_s (spin magnetic q.n.) _____

2. What are the possible values for each of the quantum numbers?

   n _____

   l _____

   m_l _____

   m_s _____

3. Draw a sketch of an orbital with the given angular momentum quantum number.

   l = 0 l = 1 l = 2

4. Complete the following table:

n	*l*	m_l	Orbital Designation	Number of orbitals
3		-1, 0, 1		3
3				5
4	3			
5			5p	