

Name: \_\_\_\_\_

Date: \_\_\_\_\_

[8 pt] 1. Fill in the chart below for each Quantum Number:

Quantum Number	Symbol	Allowed Values	Description
Principle QN			
Angular Momentum QN			
Magnetic QN			
Spin QN			

[12 pt] 2. Fill in the chart below for the Angular Momentum Quantum Number:

Quantum Number	$l=0$	$l=1$	$l=2$	$l=3$
Subshell Notation				
Sketch Shape				
# of orbitals				

[10 pt] 3. Fill in the missing quantum number(s) in each of the quantum "address's" below:

Quantum Address	Missing Numbers	Orbital Description (1s, 2p etc.)
(a) $n = 1, l = 0, m_l = 0, m_s = ??$		
(b) $n = 3, l = ??, m_l = -2, m_s = +1/2$		
(c) $n = ??, l = 3, m_l = 1, m_s = 1/2$		
(d) $n = 2, l = 0, m_l = ??, m_s = -1/2$		
(e) $n = 3, l = ??, m_l = -1, m_s = -1/2$		