Honors Chemistry I

Quantum numbers problems

1. What is the total number of orbitals associated with the principal quantum number n=3?
2. What is the total number of orbitals associated with the principal quantum number n=4?
3. Write all of the 4 quantum number combinations for all electrons in a 5 p orbital?
4. An electron in a certain atom is in the n=2 quantum level. List the possible values of l and ml that it can have
5. An electron in a certain atom is in the n=3 quantum level. List the possible values of l and ml that it can have
6. Give the values of the 4 quantum number combinations associated with the following subshells: a) 2p b) 3s c) 5d
7. Give the values of the 4 quantum number combinations associated with the following subshells: a) 4p b) 3d c) 3s d) 5f