

8. Complete the following table.

Sublevel	Number of orbitals	Maximum number of electrons
<i>s</i>		
<i>p</i>		
<i>d</i>		
<i>f</i>		

9. Complete the electron configurations for the following atoms by drawing in the arrows indicating the electrons with appropriate spins for each orbital.

	1s	2s	2p
a. beryllium (atomic number 4)	<input type="radio"/>	<input type="radio"/>	
b. carbon (atomic number 6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/>
c. fluorine (atomic number 9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/>

Write T for true or F for false. If a statement is false, replace the underlined word with one that will make the statement true, and write your correction on the blank provided.

_____ 10. If two electrons occupy the same orbital, they must have opposite spins.

_____ 11. The principal quantum number describes the energy level of an electron in an atom.

_____ 12. The Schrödinger wave equation is solvable for any multielectron system.

_____ 13. Four quantum numbers are required to describe completely an electron in an atom.

_____ 14. The sum of all electron clouds in any sublevel (or energy level) is a tetrahedral cloud.