

THE TOTAL NUMBER OF ORBITALS IN A SHELL =  $N^2$

Example:

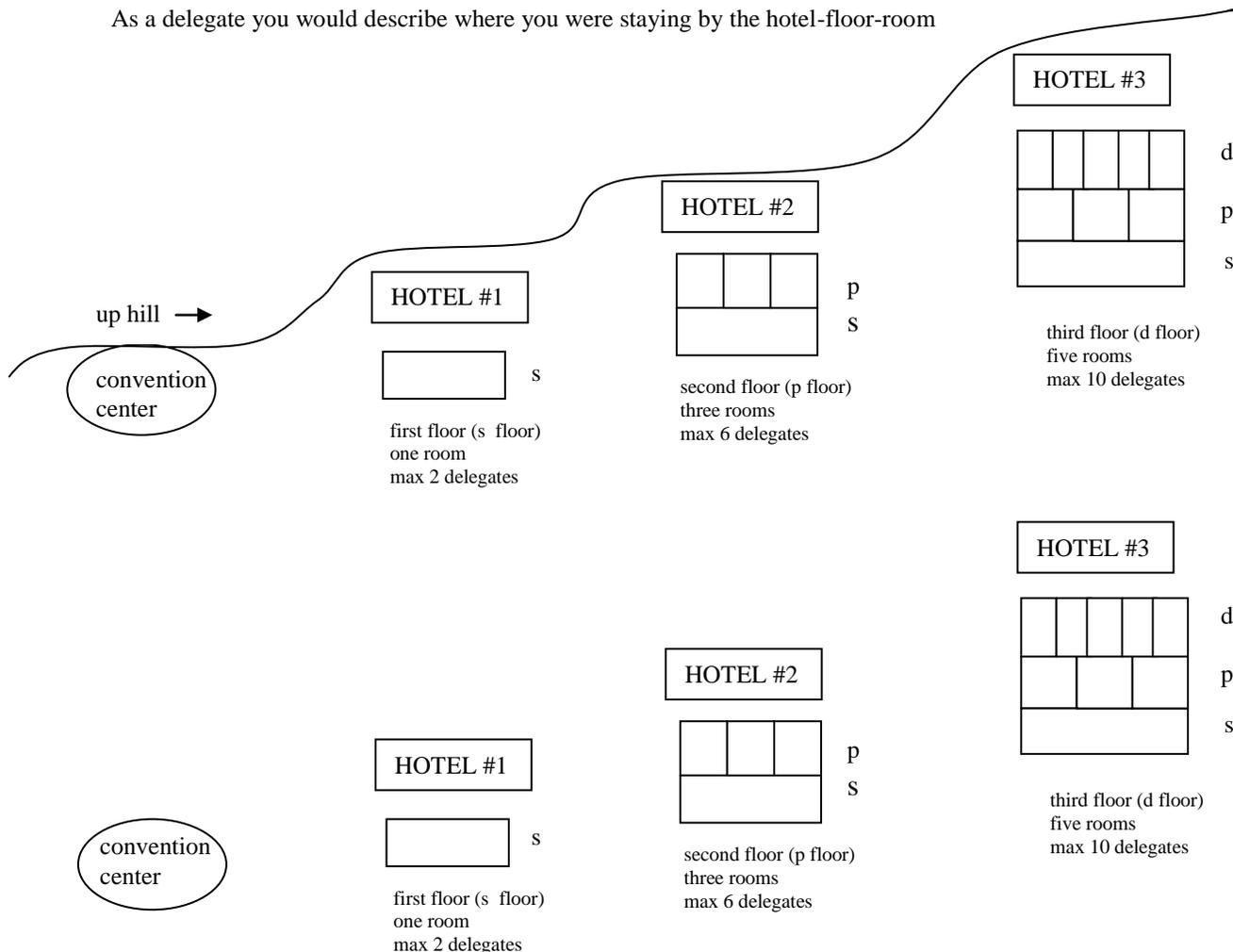
PRINCIPAL QUANTUM NUMBER (N)	SUBSHELLS	# OF ORBITALS ( $N^2$ )	DISTRIBUTION OF ORBITALS	TOTAL # OF ELECTRONS ( $2N^2$ )
1	s	1	one s	2
2	s, p	4	one s, three p	8
3	s, p, d	9	one s, three p, five d	18

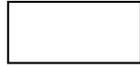
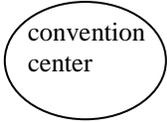
The Convention center analogy:

- Convention center is like the nucleus
- Each hotel represents a principal energy level
- Each floor represents a sublevel
- Each room represents an orbital
- Each delegate represents an electron

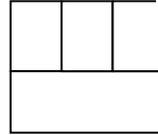
- Lastly there are only two delegates allowed per room
- Delegates don't want to room with anyone if there is a room available on the same floor
- Delegates don't want to walk up the hill to the hotel

As a delegate you would describe where you were staying by the hotel-floor-room

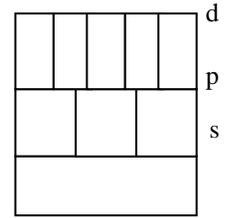




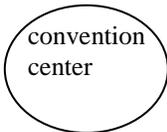
first floor (s floor)  
one room  
max 2 delegates



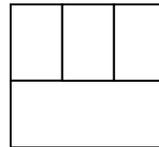
second floor (p floor)  
three rooms  
max 6 delegates



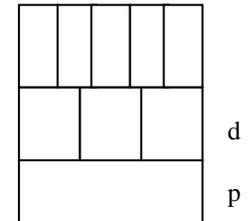
third floor (d floor)  
five rooms  
max 10 delegates



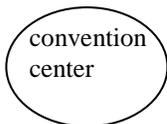
first floor (s floor)  
one room  
max 2 delegates



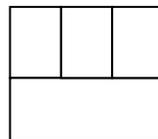
second floor (p floor)  
three rooms  
max 6 delegates



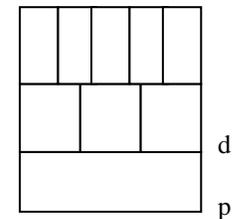
third floor (d floor)  
five rooms  
max 10 delegates



first floor (s flc)  
one room  
max 2 delegates



second floor (p fl)  
three rooms  
max 6 delegates



third floor (d floor)  
five rooms  
max 10 delegates