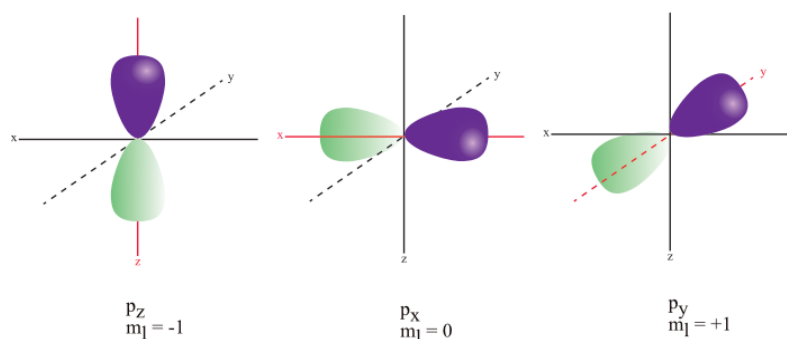


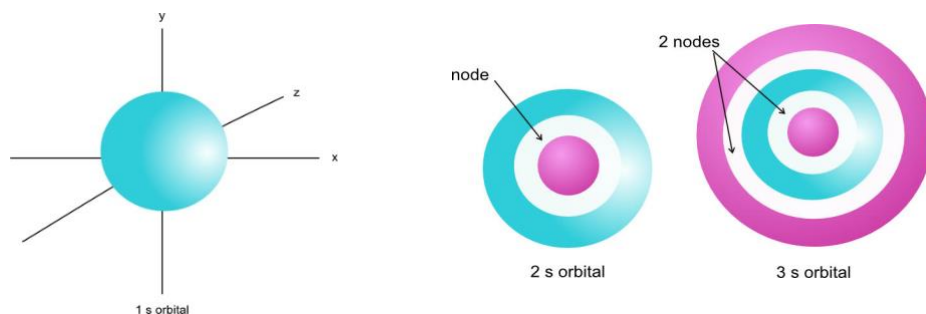
## Orbitals

1. How many orbitals are in a  $d$  subshell? 5

2. Sketch the three  $p$  orbitals.



3. Sketch the  $1s$ ,  $2s$ , and  $3s$  orbitals.



4. A  $g$  subshell has how many orbitals?

*A  $g$  subshell would have 9 orbitals*

5. What is the maximum number of electrons that can occupy a  $4f$  orbital?

*Any orbital can hold a maximum of 2 electrons*

6. What is the maximum number of electrons that can occupy a  $5d$  subshell?

*The  $5d$  subshell can hold a maximum of 10 electrons.*

7. What is the total number of orbitals in an atom of Hg?

*39 orbitals*