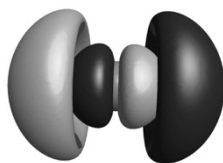


- A schematic representation of a p orbital is shown below. The central sphere (mostly obscured) represents the atomic nucleus.

Marks
2

How many spherical and planar nodes does this orbital have? Label them on the diagram above.

Number of spherical nodes:

Number of planar nodes:

What is the principal quantum number, n , of this orbital? Explain your answer.

- Shielding is important in multi-electron atoms. Briefly explain the concept of shielding.

3

Give one example of a consequence of shielding.