

Worksheet 3.2

Electrons in atoms

You are asked to summarise your knowledge of how electrons are arranged in atoms. Your summary should be arranged in paragraphs. The table below is designed to help you organise your work.

The words to use in each paragraph are in the middle column (each can be used more than once).

Paragraph	Words to use	Marks allocated
1	sub-shell levels (or sub-shells) main energy levels nucleus principal quantum numbers $n = 1$ shells	[6]
2	sub-shell levels likely to be found nucleus electrons different types orbitals p sub-shell levels regions of space s, p, d and f s sub-shell levels one orbital three orbitals	[7]
3	lobes p orbitals spherical s orbitals	[2]
4	maximum opposite spins two their repulsion is offset	[3]
5	d sub-shell filled first filling up lowest energy levels p sub-shell s sub-shell	[3]
6	principal quantum number sub-shell number of electrons present electron configurations	[2]