

Name	Symbol	Allowed Values	Important Properties
Principal quantum number	n	1, 2, 3, 4, ...	Determines shell: energy of electron and distance of electron density from nucleus
Orbital quantum number	ℓ	$0 \leq \ell \leq (n-1)$	Determines subshell: energy of electron and shape of electron-density distribution
Magnetic quantum number	m_ℓ	$-\ell \leq m_\ell \leq \ell$	Determines orientation of electron-density distribution and number of orbitals in a subshell
Spin quantum number	m_s	$+\frac{1}{2}$ or $-\frac{1}{2}$	Orientation (up or down) of electron magnetic field