

Hydrogen Wavefunctions

<code>sympy.physics.hydrogen.E_nl(n, Z=1)</code>	Returns the energy of the state (n, l) in Hartree atomic units
<code>sympy.physics.hydrogen.E_nl_dirac(n, l, spin_up=True, Z=1, c=137.035999-037000)</code>	Returns the relativistic energy of the state (n, l, spin) in Hartree atomic units.
<code>sympy.physics.hydrogen.Psi_nlm(n, l, m, r, phi, theta, Z=1)</code>	Returns the Hydrogen wave function ψ_{nlm}
<code>sympy.physics.hydrogen.R_nl(n, l, r, Z=1)</code>	Returns the Hydrogen radial wavefunction R_{nl}

matrices

<code>sympy.physics.matrices.mgamma(mu, lower=False)</code>	Returns a Dirac gamma matrix γ_μ in the standard (Dirac) representation
<code>sympy.physics.matrices.msigma(i)</code>	Returns a Pauli matrix σ_i with $i = 1, 2, 3$
<code>sympy.physics.matrices.pat_matrix(m, dx, dy, dz)</code>	Returns the Parallel Axis Theorem matrix to translate the inertia matrix a distance of (dx, dy, dz) for a body of mass m.
<code>sympy.physics.paulialgebra.evaluate_pauli_product(arg)</code>	Help function to evaluate Pauli matrices product with symbolic objects

QHO 1D

<code>sympy.physics.qho_1d.E_nl(n, omega)</code>	Returns the Energy of the One-dimensional harmonic oscillator
<code>sympy.physics.qho_1d.coherent_state(n, alpha)</code>	Returns $\langle n \alpha \rangle$ for the coherent states of 1D harmonic oscillator
<code>sympy.physics.qho_1d.psi_n(n, x, m, omega)</code>	Returns the wavefunction ψ_n for the One-dimensional harmonic oscillator

QHO 3D

<code>sympy.physics.sho.E_nl(n, l, hw)</code>	Returns the Energy of an isotropic harmonic oscillator.
<code>sympy.physics.sho.R_nl(n, l, nu, r)</code>	Returns the radial wavefunction R_{nl} for a 3d isotropic harmonic oscillator.



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Not published yet.
 Last updated 13th August, 2023.
 Page 1 of 1.

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