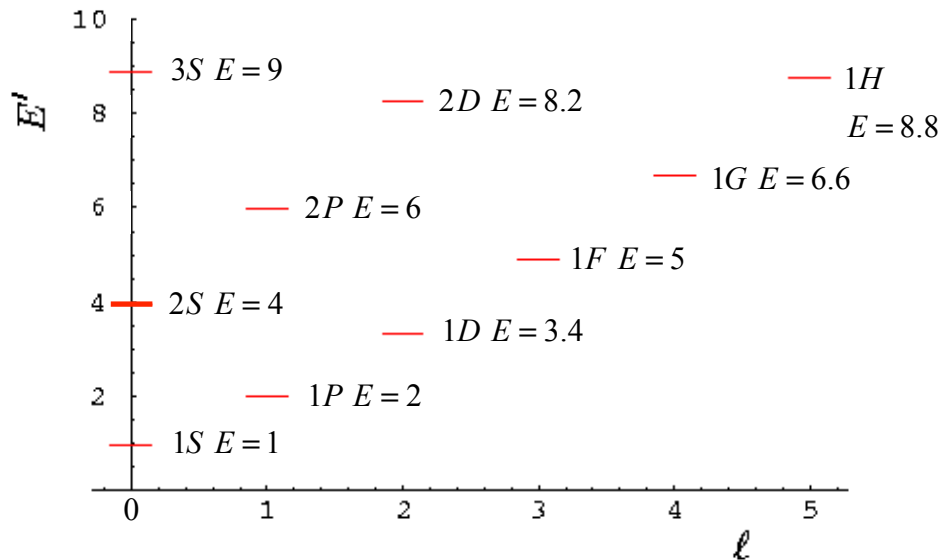


PHYS 250 Worksheet 6

Student ID	Family Name	First Name	Email

1. Particles obeying the Pauli Exclusion Principle but with no repulsion are loaded into an infinite spherical square well with energy states as illustrated.

A. What are the energies for the states with 1 to 20 particles?



B. What are the energies for states with 21-40 particles?

2. What is the relationship between the principle quantum number n in the Hydrogen wavefunctions using “real” spherical harmonics and the number of places where the time-independent wavefunction goes to zero?