HW1 Bonus: Shabani – QM2 Due Sept 30th

1. **Hearing the shape of the drum:** We know we can solve the Schrodinger equation for a given potential. The result will be eigenvalues and eigenstates. The question is if we see the observables of the equation, the eigenvalues, can we uniquely determine V(x) or the potential.
2. Calculate $[\hat{x},\widehat{H}]$ and $[\hat{p},\widehat{H}]$ or in other words do position and momentum operators commute with a generic Hamiltonian?