Quantum Mechanics
FS2024
Clicker Week 4
March 20, 2024
Mark Benazet Castells

---

1. An electron in a bound state of a finite square well will penetrate the potential barrier.

   ■ **T** ☐ F When the potential is finite, we will have penetration into the barrier.

2. If an electron has an energy E that is higher than the minimum potential energy $V_{\min}$ of a finite well, then it must be in a bound state.

   ☐ T ■ **F** It can also be in a scattering state.

3. If a particle is described by a quantum mechanical harmonic oscillator, the probability of finding it near the center of the potential (at $x = 0$) is always greater than finding it near the edges (at x near the classical turning point).

   ☐ T ■ **F** It can also be zero in the middle of the H.O

4. In Quantum Mechanics, all measurements are probabilistic.

   ☐ T ■ **F** While most measurements yield probabilistic outcomes, if the system is in a determinate state, the result is deterministic.