

In class we gave 3 criteria every wavefn must meet. What would be the physical consequences if any of these criteria were not met?

- (1) continuous If the wavefunction were not continuous, the probability at certain points could be undefined.
- (2) single-valued Again, releasing this constraint could give rise to points where the probability has multiple values - a physically unrealistic situation!
- (3) normalizable / square integrable If you can't integrate the square, you can't normalize the wavefn. Thus, the probability could be  $\gg 1$  or  $\ll 1$  instead of the physically required 1.