

Today

I. Last Time

II. Ethan's Guest Lecture on State Vector Formalism

III. Survey

I. Last time

* Treated the delta-function potential well:

$$V(x) = -\alpha\delta(x)$$

*Looked for bound states: $E < 0$

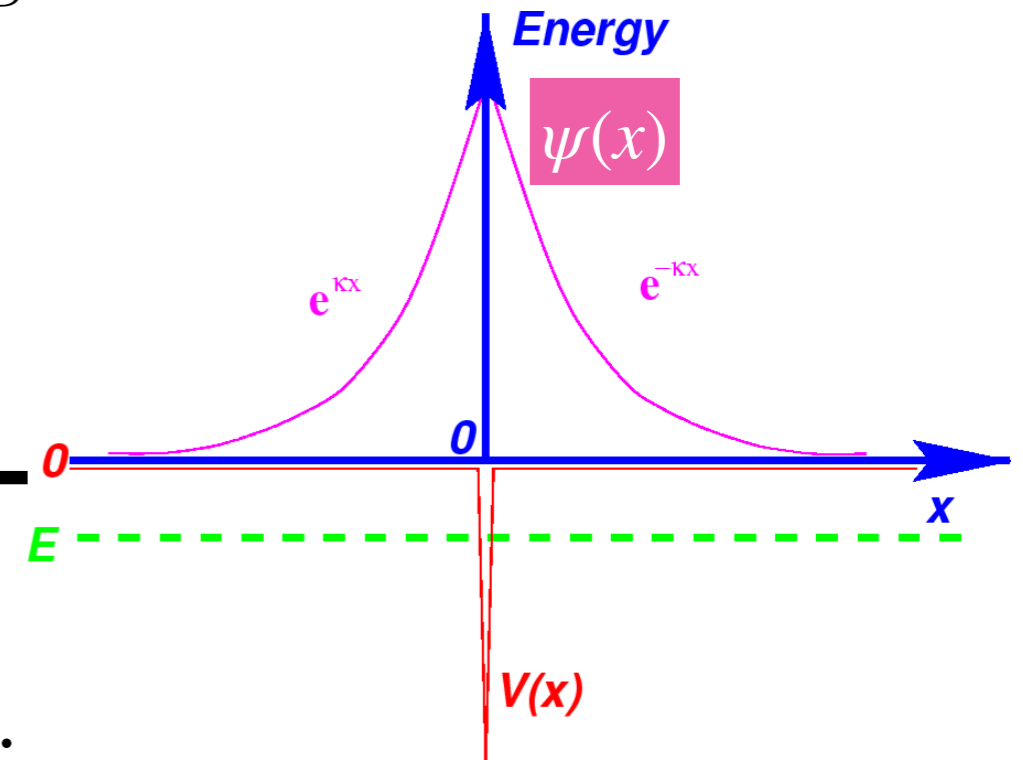
*Boundary conditions: $\psi(x)$ is continuous everywhere

$\frac{d\psi}{dx}$ is continuous everywhere except where $V = \pm \infty$

$$E = -\frac{k^2 \hbar^2}{2m} = -\frac{m\alpha^2}{2\hbar^2}$$

Finally we determine B by normalizing:

$$B = \sqrt{k}$$



$$\psi(x) = \frac{\sqrt{m\alpha}}{\hbar} e^{-\frac{m\alpha}{\hbar^2}|x|}, \quad \text{and} \quad E = -\frac{m\alpha^2}{2\hbar^2}.$$

II. Ethan's Guest Lecture on State Vector Formalism

See Ethan's very nice Power Point presentation, which you can download from the Notes tab of our course site.

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Q3. What aspect of the class do you like best? Worst?

Q4. Do you have recommendations or thoughts about new formats, technologies, or things that we should do given that we will most likely be online for the rest of the semester? (Could be tools, could be lecture formats, could be ways of discussing, etc.)

Anonymous mailer: <http://gilc.org/speech/anonymous/remailer.html>

Q5. Open feedback: Is there anything that you would like to add? Do you have suggestions for improving the course? The more specific, the better.