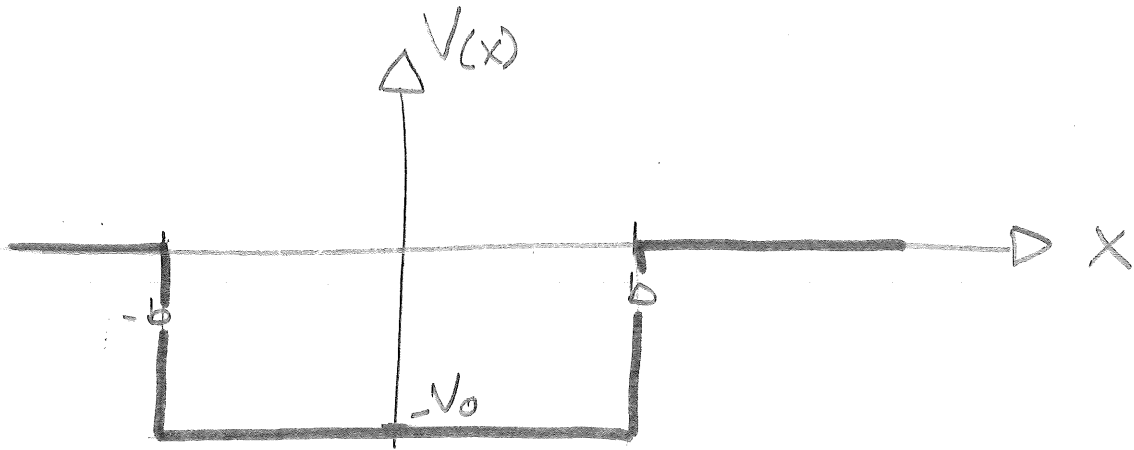


OHLÉN

MAX

4-5

$$V(x) = \begin{cases} -V_0, & |x| < b \\ 0, & |x| > b \end{cases}$$



$$E = -\frac{V_0}{2} = V_0 = -2E$$

a) S.E: $-\frac{\hbar^2}{2m} \phi'' + V(x) \cdot \phi = E \phi$

I brunnens:

$$V(x) = V_0, \quad E = -\frac{V_0}{2}$$

$$\Rightarrow -\frac{\hbar^2}{2m} \phi'' - V_0 \phi = -\frac{V_0}{2} \phi$$

Utanför brunnens:

$$V(x) = 0, \quad E = -\frac{V_0}{2}$$

$$\Rightarrow -\frac{\hbar^2}{2m} \phi'' = -\frac{V_0}{2} \phi$$