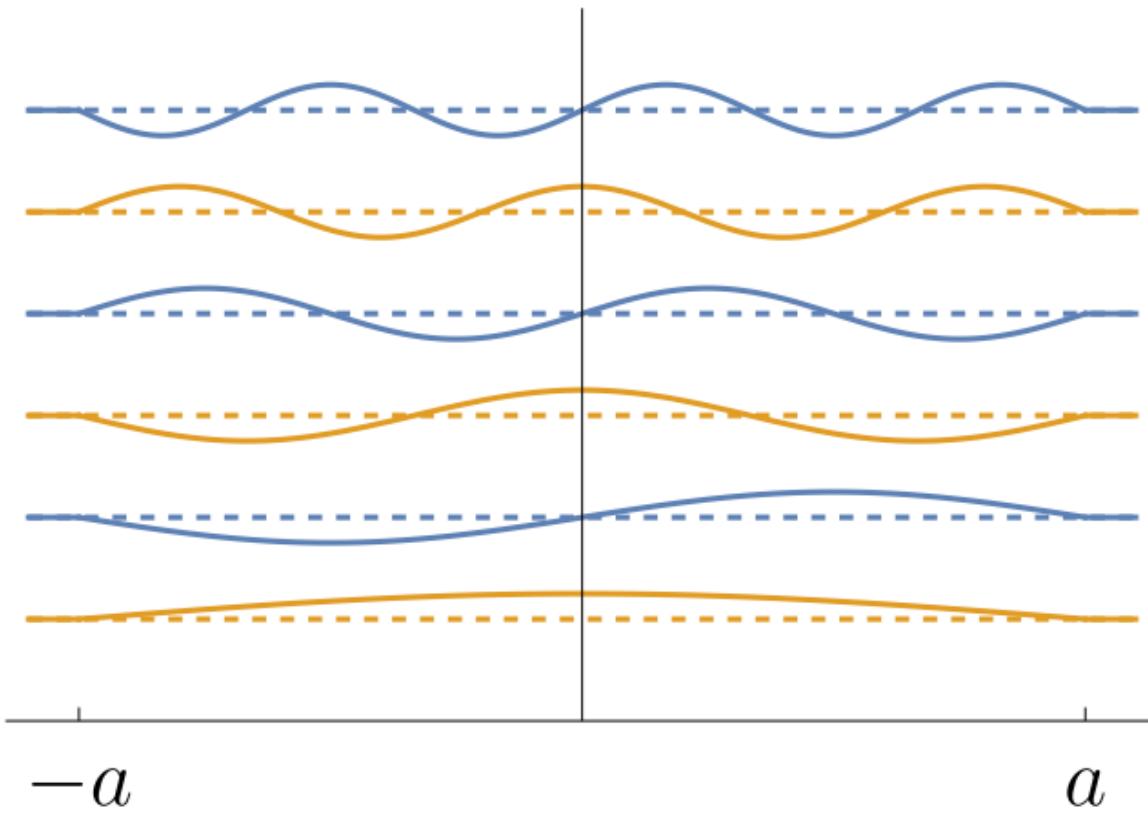$V_0 = \infty$

$E_n = \left(\dfrac{n\pi}{2a}\right)^2$

$-a$ a