71. For $U = U_0$, Schrödinger's equation becomes

$$\frac{d^2\psi}{dx^2} + \frac{8\pi^2 m}{h^2}\left[E - U_0\right]\psi = 0 \ .$$

We substitute $\psi = \psi_0 e^{ikx}$. The second derivative is $d^2\psi/dx^2 = -k^2\psi_0 e^{ikx} = -k^2\psi$. The result is

$$-k^2\psi + \frac{8\pi^2 m}{h^2}\left[E - U_0\right]\psi = 0 \ .$$

Solving for k, we obtain

$$k = \sqrt{\frac{8\pi^2 m}{h^2}\left[E - U_0\right]} = \frac{2\pi}{h}\sqrt{2m\left[E - U_0\right]} \ .$$