

$$\frac{-\hbar^2}{2m} \frac{d^2 \psi(x)}{dx^2} + V(x) \psi(x) = E \psi(x)$$

Subtract the right side of the above equation:

$$\frac{-\hbar^2}{2m} \frac{d^2 \psi(x)}{dx^2} + V(x) \psi(x) - E \psi(x) = 0$$

Now $V - E = 2.2 \text{ MeV}$. So I replace above with this value:

$$\frac{-\hbar^2}{2m} \frac{d^2 \psi(x)}{dx^2} + \psi(x)(2.2 \text{ MeV}) = 0$$

I divide by $-(\hbar^2 / 2m)$:

$$\frac{d^2 \psi(x)}{dx^2} + \frac{2.2 \text{ MeV}}{\frac{-\hbar^2}{2m}} \psi(x) = 0$$

The above is a second- order homogenous linear differentiable equation, so I solve it by solving the associated quadratic equation:

$$\psi(x) = Ae^{1.256 E^{-4}} + Be^{-1.256 E^{-4}}$$