$$\Psi_{n}(x) = \left(\frac{m\omega}{\pi\hbar}\right)^{\frac{1}{4}} \frac{1}{\sqrt{2^{n}n!}} H_{n}\left(\sqrt{\frac{m\omega}{\hbar}}x\right) e^{-\frac{1}{2}\frac{n\omega}{\hbar}x^{2}}$$

$$E_{7} \qquad \qquad \Psi_{7}(x)$$

$$E_{6} \qquad \qquad \Psi_{6}(x)$$

$$E_{5} \qquad \qquad \Psi_{5}(x)$$

$$E_{4} \qquad \qquad \Psi_{4}(x)$$

$$E_{3} \qquad \qquad \Psi_{3}(x)$$

$$E_{2} \qquad \qquad \Psi_{2}(x)$$

$$E_{1} \qquad \qquad \Psi_{1}(x)$$

$$E_{0} \qquad \qquad \Psi_{0}(x)$$