$u_{e1}(x) = \sum_{n=0}^{\infty} a_{2n+1} x^{2n+1}$	$u_{e2}(x) = \sum_{n=0}^{\infty} a_{2n} x^{2n}$
$x u_{e1}(x) = \int de' \, \xi_1(e, e') u_{e'2}(x)$	$x u_{e2}(x) = \int de' \, \xi_2(e, e') u_{e'1}(x)$
$-i\hbar \frac{d}{dx} u_{e1}(x) = \int de' \, \eta_1(e, e') u_{e'2}(x)$	$-i\hbar \frac{d}{dx} u_{e2}(x) = \int de' \, \eta_2(e, e') u_{e'1}(x)$

$$\xi_1(e, e') = \frac{a_1(e)}{a_2(e')} \cdot \frac{\Gamma\left(\frac{5}{4} + \frac{e'}{4i\hbar m\alpha}\right)}{\Gamma\left(\frac{3}{4} + \frac{e}{4i\hbar m\alpha}\right)} \left[\delta(e + 2i\hbar m\alpha - e') + \left(\frac{1}{4} - \frac{e}{4i\hbar m\alpha}\right)\delta(e - 2i\hbar m\alpha - e')\right]$$

$$\xi_2(e, e') = \frac{-\hbar}{im\alpha} \cdot \frac{a_2(e)}{a_1(e')} \cdot \frac{\Gamma\left(\frac{3}{4} + \frac{e'}{4i\hbar m\alpha}\right)}{\Gamma\left(\frac{5}{4} + \frac{e}{4i\hbar m\alpha}\right)} \left[\delta(e + 2i\hbar m\alpha - e') + \left(\frac{1}{4} - \frac{e}{4i\hbar m\alpha}\right)\delta(e - 2i\hbar m\alpha - e')\right]$$

$$\eta_1(e, e') = -2m\alpha \frac{a_1(e)}{a_2(e')} \cdot \frac{\Gamma\left(\frac{5}{4} + \frac{e'}{4i\hbar m\alpha}\right)}{\Gamma\left(\frac{3}{4} + \frac{e}{4i\hbar m\alpha}\right)} \delta(e + 2i\hbar m\alpha - e')$$

$$\eta_2(e, e') = -2i\hbar \frac{a_2(e)}{a_1(e')} \cdot \frac{\Gamma\left(\frac{3}{4} + \frac{e'}{4i\hbar m\alpha}\right)}{\Gamma\left(\frac{5}{4} + \frac{e}{4i\hbar m\alpha}\right)} \delta(e + 2i\hbar m\alpha - e')$$