$$\beta_n = \frac{4m\alpha}{(2\infty+1)i\hbar}[\cos(\pi/n)-1]$$

$$\gamma_n = \frac{4m\alpha}{(2\infty+1)i\hbar}\sin(\pi/n)$$

$$\sum_{n=1}^{\infty}\left[\left(\frac{\partial}{\partial a_n}\right)^2+\left(\frac{\partial}{\partial b_n}\right)^2-(\beta_n a_n-\gamma_n b_n)\frac{\partial}{\partial a_n}\right.$$

$$\left.-(\beta_n b_n+\gamma_n a_n)\frac{\partial}{\partial b_n}\right]F=0$$

$$F(a_1,b_1;a_2,b_2;a_3,b_3;\cdot\cdot\cdot)=f(a_n,b_n)$$

$$\left[\left(\frac{\partial}{\partial \xi}\right)^2+\left(\frac{\partial}{\partial \eta}\right)^2-(\beta_n\xi-\gamma_n\eta)\frac{\partial}{\partial \xi}\right.$$

$$\left.-(\beta_n\eta+\gamma_n\xi)\frac{\partial}{\partial \eta}\right]f(\xi,\eta)=0$$