$$0 = (2x_2+1)(2u_2+1) - 2\Delta x_{12}\Delta_2 - (2x_1+1)(2u_1+1) + 2\Delta x_{12}\Delta_1$$

Be $x_2 > x_1$, $x_1 = x_2 - \Delta x_{12}$, and $(2x_2+1) = (2x_1+1)(2x_1'+1)$

~~Ex~~ $(\Delta x_{12} = x_2 - x_1)$

~~Ex~~

$$(2x_1+1)(2u_1+1) = (2x_2+1)(2u_2+1) + 2\Delta x_{12}(-\Delta_2+\Delta_1)$$

$$(2x_1+1)(2u_1+1) = (2x_1+1)(2x_1'+1)(2u_2+1) + 2\Delta x_{12}(-\Delta_2+\Delta_1)$$

$$(2u_1+1) = (2x_1'+1)(2u_2+1) + \underbrace{\frac{2\Delta x_{12}(-\Delta_2+\Delta_1)}{2x_1+1}}_{①}$$

$$① = \frac{2\cdot(x_2-x_1)(-\Delta_2+\Delta_1)}{2x_1+1}$$

$$= \frac{2\cdot\left(\left((2x_1+1)(2x_1'+1)-1\right)\frac{1}{2} - x_1\right)(-\Delta_2+\Delta_1)}{2x_1+1}$$

$$= \frac{\left((2x_1+1)(2x_1'+1)-1-2x_1\right)(-\Delta_2+\Delta_1)}{(2x_1+1)}$$

$$= \frac{(2x_1+1)(2x_1'+1)(-\Delta_2+\Delta_1)}{(2x_1+1)} - \frac{(2x_1+1)(-\Delta_2+\Delta_1)}{(2x_1+1)}$$

$$= (2x_1'+1)(-\Delta_2+\Delta_1) - (-\Delta_2+\Delta_1)$$

$$= (-\Delta_2+\Delta_1)(2x_1'+1-1)$$

$$= (-\Delta_2+\Delta_1)\,2x_1'$$

$$\Rightarrow \boxed{2u_1+1 = (2x_1'+1)(2u_2+1) + (-\Delta_2+\Delta_1)\cdot 2x_1'}$$

$$= 2x_1'u_2\cdot 2 + 2x_1' + 2u_2 + 1 + (-\Delta_2+\Delta_1)\cdot 2x_1'$$

$$2u_1 = 2^2 x_1'u_2 + 2x_1' + 2u_2 + (-\Delta_2+\Delta_1)\cdot 2x_1'$$

$$\boxed{u_1 = 2x_1'u_2 + x_1' + u_2 + (-\Delta_2+\Delta_1)x_1'}$$

$$\boxed{u_1 = \underbrace{2x_1'u_2 + u_2}_{(2x_1'+1)u_2} + (-\Delta_2+\Delta_1+1)x_1'}$$