II Be $\overline{n_1} = (2x_1+1)y_1 - \Delta_1$

<u>Relationship between old and new equation.</u>

and $\overline{n_1}' = (2x_1+1)y_1' - \Delta x_{1,2}\Delta_1$

$$\overline{n_1}' = \overline{n_1}$$

$$(2x_1+1)y_1' - \Delta x_{1,2}\Delta_1 = (2x_1+1)y_1 - \Delta_1$$

$$0 = (2x_1+1)y_1 - (2x_1+1)y_1' - \Delta_1 + \Delta x_{1,2}\Delta_1$$

$$(2x_1+1)y_1' = (2x_1+1)y_1 - \Delta_1 + \Delta x_{1,2}\Delta_1$$

$$y_1' = y_1 + \frac{-\Delta_1 + \Delta x_{1,2}\Delta_1}{2x_1+1}$$

$$\boxed{y_1' = y_1 + \frac{\Delta_1(-1+\Delta x_{1,2})}{2x_1+1}} \quad (\text{eq. } 9^1)$$

$$\Leftrightarrow \boxed{y_1 = y_1' - \frac{\Delta_1(-1+\Delta x_{1,2})}{2x_1+1}} \quad (\text{eq. } 9^2)$$

Be y_1^{m} given.

$$y_1' = y_1^{m} + \frac{\Delta_1(-1+\Delta x_{1,2})}{2x_1+1}$$

and

$$y_1' = x_2 \cdot (-\Delta_2 + \Delta_1) + (2x_2+1)z_{1,2}$$

$$\Rightarrow \quad x_2 \cdot (-\Delta_2+\Delta_1) + (2x_2+1)z_{1,2} = y_1^{m} + \frac{\Delta_1(-1+\Delta x_{1,2})}{2x_1+1}$$

$$\Leftrightarrow \quad (2x_2+1)z_{1,2} = y_1^{m} + \frac{\Delta_1(-1+\Delta x_{1,2})}{2x_1+1} - x_2(-\Delta_2+\Delta_1)$$

$$\Leftrightarrow \quad (\text{eq. } 10) \quad \boxed{z_{1,2} = \frac{y_1^{m}}{2x_2+1} + \frac{\Delta_1(-1+\Delta x_{1,2})}{(2x_1+1)(2x_2+1)} - \frac{x_2(-\Delta_2+\Delta_1)}{2x_2+1}}$$

<u>**Warning W1**</u>

still $\lfloor x \rfloor$ and $\lceil x \rceil$ necessary !!! for $z_{1,2}$?

$$\Rightarrow \quad \overline{n_1}' = (2x_1+1)y_1' - \Delta x_{1,2}\Delta_1$$

and $y_1' = x_2(-\Delta_2+\Delta_1) + (2x_2+1)z_{1,2}$

$$\Rightarrow \boxed{\begin{aligned} \overline{n_{1,2}} &= (2x_1+1)\left[x_2(-\Delta_2+\Delta_1) + (2x_2+1)z_{1,2}\right] - \Delta x_{1,2}\Delta_1 \\ &= (2x_1+1)(2x_2+1)z_{1,2} + (2x_1+1)(-\Delta_2+\Delta_1)x_2 - \Delta x_{1,2}\Delta_1 \end{aligned}}$$