~~$(2x_1+1)\tilde{y}_2$~~

$$(2x_1+1)\tilde{y}_1' = (2x_1+1)\tilde{y}_2' + (2\Delta x_{1,2})(\tilde{y}_2'+1) - \Delta x_{1,2}\Delta_2 + \Delta x_{1,2}\Delta_1$$

$$\Rightarrow \tilde{y}_1' = \tilde{y}_2' + \frac{2\Delta x_{1,2}(\tilde{y}_2'+1) + \Delta x_{1,2}(-\Delta_2+\Delta_1)}{2x_1+1} \quad \checkmark$$

$$\Rightarrow \boxed{\begin{aligned} \tilde{y}_1' &= x_2(-\Delta_2+\Delta_1) + (2x_2+1)z_{1,2} - 1 \\ \tilde{y}_2' &= x_1(-\Delta_2+\Delta_1) + (2x_1+1)z_{1,2} - 1 \end{aligned}} \quad (eq.13)$$

$$\begin{aligned} \bar{n}_{1,2}' &= (2x_1+1)\tilde{y}_1' + (2x_1+1) - \Delta x_{1,2}\Delta_1 \\ &= (2x_1+1)\left[x_2(-\Delta_2+\Delta_1) + (2x_2+1)z_{1,2} - 1\right] \\ &\quad + (2x_1+1) - \Delta x_{1,2}\Delta_1 \\ &= (2x_1+1)(2x_2+1)z_{1,2} \\ &\quad + (2x_1+1)(-\Delta_2+\Delta_1)x_2 - \cancel{(2x_1+1)} + \cancel{(2x_1+1)} \\ &\quad - \Delta x_{1,2}\Delta_1 \\ &= (2x_1+1)(2x_2+1)z_{1,2} + (2x_1+1)(-\Delta_2+\Delta_1)x_2 - \Delta x_{1,2}\Delta_1 \end{aligned}$$

the ~~same~~ same like before. ✓