

$$\begin{aligned}
 O_{11} &= H_1 + H_4 - H_5 + H_7 \\
 &= \cancel{[(M_{11} + M_{22}) \cdot (N_{11} + N_{22})]} + \cancel{[M_{22} \cdot (N_{21} - N_{12})]} - H_5 + H_7 \\
 &= \cancel{[M_{11}N_{11} + M_{11}N_{22} + M_{22}N_{11} + M_{22}N_{22}]} + \cancel{[M_{22}N_{21} - M_{22}N_{12}]} - H_5 + H_7 \\
 &= M_{11}N_{11} + M_{11}N_{22} + M_{22}N_{22} + \cancel{2} - \cancel{[M_{11}N_{22} + M_{12}N_{22}]} + H_7 \\
 &= M_{11}N_{11} + 2(M_{22}N_{22}) - M_{12}N_{22} + \cancel{[(M_{12} - M_{21}) \cdot (N_{21} + N_{12})]} \\
 &= M_{11}N_{11} + 2(M_{22}N_{22}) - M_{12}N_{22} + \cancel{[M_{12}N_{21} + M_{22}N_{22} - M_{22}N_{21} - M_{22}N_{22}]} \\
 &= M_{11}N_{11} + M_{22}N_{22} + M_{12}N_{21} - M_{22}N_{21}
 \end{aligned}$$

$$\begin{aligned}
 O_{12} &= H_3 + H_5 \\
 &= [M_{11} \cdot (N_{12} - N_{22})] + [(M_{11} + M_{12}) \cdot N_{22}] \\
 &= M_{11}N_{12} - \cancel{M_{11}N_{22}} + M_{12}N_{22} + M_{12}N_{22} \\
 &= M_{11}N_{12} + M_{12}N_{22} = \text{Var 1}(O_{12})
 \end{aligned}$$

$$\begin{aligned}
 O_{21} &= H_2 + H_4 \\
 &= (M_{21} + M_{22}) \cdot N_{11} + [M_{22} \cdot (N_{21} - N_{11})] \\
 &= M_{21}N_{11} + \cancel{M_{22}N_{11}} + \cancel{[M_{22}N_{21} - M_{22}N_{11}]} \\
 &= M_{21}N_{11} + M_{22}N_{21} = \text{Var 1}(O_{21})
 \end{aligned}$$

$$\begin{aligned}
 O_{22} &= H_1 - H_2 + H_3 + H_6 \\
 &= (M_{11} + M_{22}) \cdot (N_{11} + N_{22}) - [M_{21}N_{11} + M_{22}N_{11}] + M_{11}N_{12} - M_{11}N_{22} + H_6 \\
 &= M_{11}N_{11} + \cancel{M_{11}N_{22}} + \cancel{M_{22}N_{11}} + M_{22}N_{22} - M_{21}N_{11} - \cancel{M_{22}N_{11}} + M_{11}N_{12} - \cancel{M_{11}N_{22}} + H_6 \\
 &= M_{11}N_{11} + M_{22}N_{22} - M_{21}N_{11} + M_{11}N_{12} + \cancel{[(M_{21} - M_{11}) \cdot (N_{11} + N_{12})]} \\
 &= \cancel{M_{11}N_{11}} + M_{22}N_{22} - \cancel{M_{21}N_{11}} + M_{11}N_{12} + \cancel{[(M_{21} - M_{11}) \cdot (N_{11} + N_{12})]} \\
 &= M_{22}N_{22} + M_{21}N_{12} = \text{Var 1}(O_{22})
 \end{aligned}$$

$$\begin{aligned}
 O_{11} &= H_1 + H_4 - H_5 + H_7 \\
 &= M_{11}N_{11} + M_{11}N_{22} + \cancel{M_{22}N_{11}} + M_{22}N_{22} + M_{22}N_{21} - \cancel{M_{11}N_{21}} + H_5 + H_7 \\
 &= M_{11}N_{11} + \cancel{M_{22}N_{11}} + M_{22}N_{22} + M_{22}N_{21} - \cancel{M_{11}N_{21}} - M_{12}N_{22} + H_7 \\
 &= M_{11}N_{11} + \cancel{M_{22}N_{22}} + \cancel{M_{22}N_{21}} - \cancel{M_{11}N_{21}} + M_{12}N_{21} + \cancel{M_{12}N_{22}} - \cancel{M_{22}N_{21}} \\
 &= M_{11}N_{11} + M_{12}N_{21} = \text{Var 1}(O_{11})
 \end{aligned}$$