

$$\begin{aligned}
& \mathbb{E}_{\{1,3\} \rightarrow \{1,2,3,4,5\}} \left[\hbar \mathbf{a}_2 \mathbf{b}_1 + \hbar \mathbf{a}_4 \mathbf{b}_3 + \mathbf{a}_5 \alpha_1 + \mathbf{a}_5 \alpha_3 + \mathbf{b}_5 \beta_1 + \mathbf{b}_5 \beta_3, \right. \\
& \hbar \mathbf{x}_2 \mathbf{y}_1 + \hbar \mathbf{x}_4 \mathbf{y}_3 + \mathbf{y}_5 \eta_1 + \frac{\mathbf{y}_5 \eta_3}{\mathcal{A}_1} + \frac{\mathbf{x}_5 \xi_1}{\mathcal{A}_3} + \frac{(\mathbf{1} - \mathbf{B}_5) \eta_3 \xi_1}{\hbar} + \mathbf{x}_5 \xi_3, \\
& \mathbf{1} + \left(-\frac{\mathbf{1}}{4} \hbar^3 \mathbf{x}_2^2 \mathbf{y}_1^2 - \frac{\mathbf{1}}{4} \hbar^3 \mathbf{x}_4^2 \mathbf{y}_3^2 - \frac{\mathbf{y}_5 \beta_1 \eta_3}{\mathcal{A}_1} - \frac{\mathbf{x}_5 \beta_3 \xi_1}{\mathcal{A}_3} + \mathbf{a}_5 \mathbf{B}_5 \eta_3 \xi_1 + \frac{\hbar \mathbf{x}_5 \mathbf{y}_5 \eta_3 \xi_1}{\mathcal{A}_1 \mathcal{A}_3} + \right. \\
& \left. \frac{(\mathbf{1} - 3 \mathbf{B}_5) \mathbf{y}_5 \eta_3^2 \xi_1}{2 \mathcal{A}_1} + \frac{(\mathbf{1} - 3 \mathbf{B}_5) \mathbf{x}_5 \eta_3 \xi_1^2}{2 \mathcal{A}_3} + \frac{(\mathbf{1} - 4 \mathbf{B}_5 + 3 \mathbf{B}_5^2) \eta_3^2 \xi_1^2}{4 \hbar} \right) \epsilon + \mathbf{0} [\epsilon]^2 \left. \right]
\end{aligned}$$