

$$\begin{aligned}
\mathcal{L}[\mathbf{X}_{i,j}[s_-]] &:= \mathbf{T}_3^s \mathbb{E}[\text{CF@Plus}[ \\
&\sum_{v=1}^3 (\mathbf{x}_{vi} (\mathbf{p}_{vi^+} - \mathbf{p}_{vi}) + \mathbf{x}_{vj} (\mathbf{p}_{vj^+} - \mathbf{p}_{vj}) + (\mathbf{T}_v^s - \mathbf{1}) \mathbf{x}_{vi} (\mathbf{p}_{vi^+} - \mathbf{p}_{vj^+})) , \\
&(\mathbf{T}_1^s - \mathbf{1}) \mathbf{p}_{3j} \mathbf{x}_{1i} (\mathbf{T}_2^s \mathbf{x}_{2i} - \mathbf{x}_{2j}) , \\
&\in s (\mathbf{T}_3^s - \mathbf{1}) \mathbf{p}_{1j} (\mathbf{p}_{2i} - \mathbf{p}_{2j}) \mathbf{x}_{3i} / (\mathbf{T}_2^s - \mathbf{1}) , \\
&\in s (\mathbf{1} / 2 + \mathbf{T}_2^s \mathbf{p}_{1i} \mathbf{p}_{2j} \mathbf{x}_{1i} \mathbf{x}_{2i} - \mathbf{p}_{1i} \mathbf{p}_{2j} \mathbf{x}_{1i} \mathbf{x}_{2j} - \mathbf{p}_{3i} \mathbf{x}_{3i} - \\
&(\mathbf{T}_2^s - \mathbf{1}) \mathbf{p}_{2j} \mathbf{p}_{3i} \mathbf{x}_{2i} \mathbf{x}_{3i} + (\mathbf{T}_3^s - \mathbf{1}) \mathbf{p}_{2j} \mathbf{p}_{3j} \mathbf{x}_{2i} \mathbf{x}_{3i} + \\
&2 \mathbf{p}_{2j} \mathbf{p}_{3i} \mathbf{x}_{2j} \mathbf{x}_{3i} + \mathbf{p}_{1i} \mathbf{p}_{3j} \mathbf{x}_{1i} \mathbf{x}_{3j} - \mathbf{p}_{2i} \mathbf{p}_{3j} \mathbf{x}_{2i} \mathbf{x}_{3j} - \\
&\mathbf{T}_2^s \mathbf{p}_{2j} \mathbf{p}_{3j} \mathbf{x}_{2i} \mathbf{x}_{3j} + \\
&((\mathbf{T}_1^s - \mathbf{1}) \mathbf{p}_{1j} \mathbf{x}_{1i} (\mathbf{T}_2^{2s} \mathbf{p}_{2j} \mathbf{x}_{2i} - \mathbf{T}_2^s \mathbf{p}_{2j} \mathbf{x}_{2j} - \\
&(\mathbf{T}_2^s + \mathbf{1}) (\mathbf{T}_3^s - \mathbf{1}) \mathbf{p}_{3j} \mathbf{x}_{3i} + \mathbf{T}_2^s \mathbf{p}_{3j} \mathbf{x}_{3j}) + \\
&(\mathbf{T}_3^s - \mathbf{1}) \mathbf{p}_{3j} \mathbf{x}_{3i} (\mathbf{1} - \mathbf{T}_2^s \mathbf{p}_{1i} \mathbf{x}_{1i} + \mathbf{p}_{2i} \mathbf{x}_{2j} + (\mathbf{T}_2^s - 2) \mathbf{p}_{2j} \mathbf{x}_{2j})) / \\
&(\mathbf{T}_2^s - \mathbf{1})]]]
\end{aligned}$$