```
1/3i\langle 12\rangle^3[15]^3\langle 23\rangle[23]^2s_{123}
                                                                   \frac{1}{[45](1|2+3|1]^3(1|2+3|4](1|2+3|6](3|1+2|6|)} +
                                                                     \frac{-1/3i\langle 12\rangle^3[15]^3[23]\langle 3|1+2|5]s_{\textstyle 123}}{\langle 13\rangle[45][56]\langle 1|2+3|1]^3\langle 1|2+3|4]\langle 3|1+2|6|}+
                                                                 \frac{1/2i\langle12\rangle^3[15]^2\langle23\rangle[23]^2[56]s_{\textstyle 123}}{[45]\langle1|2+3|1]^2\langle1|2+3|4]\langle1|2+3|6]^2\langle3|1+2|6]} +
                                                                   \frac{-2/3\,i\langle 12\rangle^3[15]^3\langle 23\rangle[23]^2}{[45]\langle 1|2+3|1]^2\langle 1|2+3|4]\langle 1|2+3|6]\langle 3|1+2|6]}+
                                                                   \frac{-1/2i[15]^2\langle 12\rangle^3\langle 23\rangle[23][25]\langle 3|1+2|5]}{\langle 13\rangle^2[45][56]\langle 1|2+3|1]^2\langle 1|2+3|4]\langle 3|1+2|6]} +
                                                                     \frac{-5/6i[15]^3\langle 12\rangle^3[23]\langle 3|1+2|5]}{\langle 13\rangle[45][56]\langle 1|2+3|1]^2\langle 1|2+3|4]\langle 3|1+2|6]}+
                                                                   \frac{1i\langle 12\rangle^3[15][23][56]^2s_{123}^2}{[45]\langle 1|2+3|1]\langle 1|2+3|4]\langle 1|2+3|6]^3\langle 3|1+2|6]}
                                                                   \frac{-1i\langle 12\rangle^3[15]^2[23][56]s_{\textstyle 123}}{[45]\langle 1|2+3|1]\langle 1|2+3|4]\langle 1|2+3|6]^2\langle 3|1+2|6]}
                                                                     \frac{1i\langle 12\rangle^3[15]^3[23]}{[45]\langle 1|2+3|1]\langle 1|2+3|4]\langle 1|2+3|6]\langle 3|1+2|6|} +
                                                                     \frac{-1i\langle 12\rangle^3[15]\langle 23\rangle^2[25]^3}{\langle 13\rangle^3[45][56]\langle 1|2+3|1]\langle 1|2+3|4]\langle 3|1+2|6]} +
                                                                     \frac{7/2i\langle 12\rangle^3[15]^2[25]\langle 3|1+2|5]}{\langle 13\rangle^2[45][56]\langle 1|2+3|1]\langle 1|2+3|4]\langle 3|1+2|6]}
                                                                       \frac{-5/6i\langle 12\rangle^3[15]^3[25]}{\langle 13\rangle |45|[56]\langle 1|2+3|1]\langle 1|2+3|4|\langle 3|1+2|6|} +
                                                                     \begin{array}{c} 11/6i\langle 12\rangle^3[15]^4[23] \\ \overline{[45][56]\langle 1|2+3|1]\langle 1|2+3|4]\langle 3|1+2|6]s_{123}} \end{array}
                                                                   \frac{-1/3i\langle 12\rangle^2[12][13]^2\langle 23\rangle[35]\langle 3|1+2|5]^2}{[56]\langle 1|2+3|4|\langle 3|1+2|3|^3\langle 3|1+2|4|\langle 3|1+2|6|}+
                                                              \frac{1/3i\langle12\rangle[12][13]\langle23\rangle^2[35]^2\langle1|2+3|5]\langle3|1+2|5]}{\langle13\rangle[45][56]\langle1|2+3|4]\langle3|1+2|3]^3\langle3|1+2|6|} +
                                                                 \frac{1/2i\langle 12\rangle^2[13]^2[14]\langle 3|1+2|5]^3}{[56]\langle 1|2+3|4]\langle 3|1+2|3]^2\langle 3|1+2|4]^2\langle 3|1+2|6]}
                                                             \frac{\langle 12 \rangle [13]^2 \langle 3|1+2|5]^2 (5/6i\langle 12 \rangle [15]-1i\langle 23 \rangle [35])}{[56] \langle 1|2+3|4] \langle 3|1+2|3]^2 \langle 3|1+2|4] \langle 3|1+2|6]} +
                                                              \frac{-1/2i\langle 12\rangle[13]\langle 23\rangle^2[25][35]\langle 1|2+3|5]\langle 3|1+2|5]}{\langle 13\rangle^2[45][56]\langle 1|2+3|4]\langle 3|1+2|3]^2\langle 3|1+2|6]}+
                                         \frac{[13]\langle 23\rangle[35]\langle 1|2+3|5]\langle 3|1+2|5](-5/3i\langle 12\rangle[15]+5/6i\langle 23\rangle[35])}{\langle 13\rangle[45][56]\langle 1|2+3|4]\langle 3|1+2|3]^2\langle 3|1+2|6]}+
                                                                   \frac{1 i [13] \langle 23 \rangle^2 [45]^2 \langle 3|1+2|5| s_{\textstyle 123}^2}{[56] \langle 1|2+3|4] \langle 3|1+2|3] \langle 3|1+2|4]^3 \langle 3|1+2|6]}
                  \frac{\langle 23 \rangle [12] \langle 3|1+2|5] (1/2i\langle 12 \rangle^2 [13] [15] [45] \dots \langle \!\langle 3\, \text{terms} \rangle\!\rangle \dots -3}{[56] \langle 1|2+3|4] \langle 3|1+2|3] \langle 3|1+2|4]^2 \langle 3|1+2|6]}
                                                                                                                                                                                          -3i\langle 23\rangle^{2}[34][35]^{2}
                                                                     \frac{1/2i\langle 12\rangle[13][15]\langle 3|1+2|5]\langle 2|1+3|5]}{[56]\langle 1|2+3|4]\langle 3|1+2|3]\langle 3|1+2|4]\langle 3|1+2|6]} +
                                                                                                -1i\langle 12 \rangle^{2}\langle 23 \rangle^{3}[25]^{3}[35]
                                                                     (13)^3[45][56](1|2+3|4](3|1+2|3](3|1+2|6]
                                                   -1/2i\langle 23\rangle[35]) +
                                                         \frac{\langle 23\rangle[25][35]\langle 2|1+3|5](5/6i\langle 12\rangle[15]-1/3i\langle 23\rangle[35])}{\langle 13\rangle[45][56]\langle 1|2+3|4]\langle 3|1+2|3|\langle 3|1+2|6|}+
             \frac{[13][35](3]1+2[5](-13/3i(12)^2[15]^2+31/6i(12)[15](23)[35]-11/6i(23)^2[35]^2)}{[45][56](1[2+3]4](3]1+2[3](3]1+2[6]s_{123}}+
                                                                                                   (123456 \rightarrow \overline{654321}) +
                                                                          \frac{1i\langle 12\rangle^2[56]^2\langle 2|1+4|5]s_{123}^2}{\langle 23\rangle[45]\langle 1|2+3|4]\langle 1|2+3|6]^3\langle 3|1+2|6]} +
                                                                           \frac{1/2i\langle 12\rangle[56]\langle 2|1+4|5]^2s_{\textstyle 123}}{\langle 23\rangle[45]\langle 1|2+3|4]\langle 1|2+3|6]^2\langle 3|1+2|6]}
                                                                           \frac{1i\langle 12\rangle\langle 23\rangle\langle 24\rangle[35][45][56]s_{\textstyle 123}}{\langle 23\rangle[45]\langle 1|2+3|4]\langle 1|2+3|6]^2\langle 3|1+2|6]} +
                                                                             \frac{1/3i\langle 2|1+4|5|^3}{\langle 23\rangle[45]\langle 1|2+3|4]\langle 1|2+3|6]\langle 3|1+2|6|} +
                                                                \frac{\langle 24 \rangle [35] (-2i\langle 12 \rangle [15] + 1i\langle 23 \rangle [35] + 1i\langle 24 \rangle [45])}{\langle 1|2 + 3|4|\langle 1|2 + 3|6|\langle 3|1 + 2|6|} +
                                                                           \frac{1i\langle 23\rangle^2[45]^2\langle 2|1+3|5]s_{123}^2}{\langle 12\rangle[56]\langle 1|2+3|4]\langle 3|1+2|4]^3\langle 3|1+2|6]}+
                                                                           \frac{1/2i\langle 23\rangle[45]\langle 2|1+4|5]^2s_{\textstyle 123}}{\langle 12\rangle[56]\langle 1|2+3|4]\langle 3|1+2|4]^2\langle 3|1+2|6]}.
\frac{\langle 23\rangle [45] s_{123} (3i(12)^2 [15]^2 - 3i(12) [15] \langle 23\rangle [35] - 3i(12) [15] \langle 24\rangle [45] + 4i(23) \langle 24\rangle [35] [45])}{\langle 12\rangle [56] \langle 12+3|4| \langle 3|1+2|4|^2 \langle 3|1+2|6]} +
                                      \frac{\langle 2|1+3|5|(-8/3i\langle12\rangle^2|15|^2...\langle\!\langle 4\,\text{terms}\rangle\!\rangle...-1/2i\langle24\rangle^2|45|^2)}{\langle12\rangle|56|\langle1|2+3|4|\langle3|1+2|4|\langle3|1+2|6|}+
                                                 \frac{-11/6i\langle 12\rangle^4[15]^4\ldots\langle\!\langle 13\,\mathrm{terms}\rangle\!\rangle\ldots-11/6i\langle 24\rangle^4[45]^4}{\langle 12\rangle\langle 23\rangle[45][56]\langle 1[2+3]4]\langle 3]1+2|6|s_{123}}
```