

$$\begin{aligned}
& \frac{-4[12]\langle 23 \rangle [45]^2}{[24][56]\langle 2|1+3|4\rangle^2} + \\
& \frac{-4(34)[45]^2}{[56]\langle 1|2+3|4\rangle\langle 2|1+3|4\rangle} + \\
& \frac{4(16)\langle 23 \rangle [23][35]}{(1|2+4|3)\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle} + \\
& \frac{4(26)[45]\langle 3|1+4|3\rangle}{\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{-1/4[12][15]\langle 34 \rangle \langle 46 \rangle}{\langle 4|2+3|1\rangle\Delta_{23|14|56}} + \\
& \frac{-3/4\langle 13 \rangle [45]\langle 6|1+5|2\rangle(s_{123}-s_{234})}{\langle 1|2+3|4\rangle^2\Delta_{23|14|56}} + \\
& \frac{1\langle 13 \rangle [24]\langle 6|2+4|5\rangle(s_{123}-s_{234})}{\langle 1|2+3|4\rangle^2\Delta_{23|14|56}} + \\
& \frac{-1[24]\langle 26 \rangle (s_{13}-s_{24})[35]\langle 13 \rangle (s_{123}-s_{234})}{\langle 1|2+3|4\rangle^2\langle 2|1+4|3\rangle\Delta_{23|14|56}} + \\
& \frac{2(26)[35](s_{13}-s_{24})(s_{124}-s_{134})(s_{12}+s_{24})}{\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle^2\Delta_{23|14|56}} + \\
& \frac{-8(26)[35](s_{13}-s_{24})}{(1|2+3|4)\langle 2|1+4|3\rangle^2} + \\
& \frac{(s_{12}+s_{13}+s_{24}+s_{34})(9/8[12]\langle 34 \rangle [35]\langle 36 \rangle \dots \langle 4 \text{ terms} \rangle \dots -9/8[12]\langle 23 \rangle [25]\langle 46 \rangle)}{\Delta_{23|14|56}^2} + \\
& \frac{(s_{123}-s_{234})(s_{12}+s_{13}+s_{24}+s_{34})(-9/16[12]\langle 14 \rangle \langle 36 \rangle [45] \dots \langle 5 \text{ terms} \rangle \dots -9/16[12]\langle 13 \rangle [35]\langle 36 \rangle)}{\langle 1|2+3|4\rangle\Delta_{23|14|56}^2} + \\
& \frac{(s_{124}-s_{134})(s_{12}+s_{13}+s_{24}+s_{34})(-3/4[13]\langle 24 \rangle [25]\langle 36 \rangle \dots \langle 4 \text{ terms} \rangle \dots -3/4[14]\langle 34 \rangle [35]\langle 46 \rangle)}{(2|1+4|3)\Delta_{23|14|56}^2} + \\
& \frac{(s_{123}-s_{234})(s_{124}-s_{134})(s_{12}+s_{13}+s_{24}+s_{34})(3/8(23)[24][35]\langle 46 \rangle \dots \langle 4 \text{ terms} \rangle \dots -3/8[12]\langle 13 \rangle \langle 26 \rangle [35])}{\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{23|14|56}^2} + \\
& \frac{2[35]\langle 36 \rangle +22[25]\langle 26 \rangle +22[45]\langle 46 \rangle}{\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle} + \\
& \frac{-4[12]\langle 14 \rangle \langle 36 \rangle [45] \dots \langle 10 \text{ terms} \rangle \dots +10[24]\langle 34 \rangle [45]\langle 46 \rangle}{\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{-11/2[12]\langle 24 \rangle [25]\langle 26 \rangle \dots \langle 11 \text{ terms} \rangle \dots +29/2[13]\langle 34 \rangle [35]\langle 36 \rangle}{\langle 2|1+4|3\rangle\Delta_{23|14|56}} + \\
& \frac{-4[12]\langle 14 \rangle \langle 24 \rangle [24]\langle 26 \rangle [45] \dots \langle 42 \text{ terms} \rangle \dots -3/2[12]\langle 13 \rangle \langle 23 \rangle \langle 26 \rangle [35]}{(1|2+3|4)\langle 2|1+4|3\rangle\Delta_{23|14|56}}
\end{aligned}$$