

$$\begin{aligned}
& \frac{-1\langle 1|3+4|2\rangle\langle 46\rangle[24]\langle 3|2+4|1\rangle\langle 26\rangle}{\langle 56\rangle\Delta_{13|24|56}\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& (123456 \rightarrow -\overline{432165}) + \\
& \frac{5/2\langle 16\rangle\langle 14\rangle[14][45](s_{123}-s_{134})(s_{14}-s_{23})^2}{\Delta_{13|24|56}\langle 1|2+4|3\rangle^2\langle 2|1+3|4\rangle^2} + \\
& \frac{24\langle 16\rangle\langle 14\rangle[14](s_{14}-s_{23})[45]}{\langle 1|2+4|3\rangle^2\langle 2|1+3|4\rangle^2} + \\
& \frac{(s_{14}-s_{23})\langle 6|1+3|5\rangle(7/2[14]\langle 14\rangle^2[24]+7/2\langle 23\rangle[23]^2\langle 13\rangle)}{\Delta_{13|24|56}\langle 1|2+4|3\rangle^2\langle 2|1+3|4\rangle} + \\
& \frac{(s_{14}-s_{23})(s_{124}-s_{234})(-8[25][14]\langle 16\rangle\langle 14\rangle \dots \langle 4 \text{ terms} \rangle \dots -1[45][23]\langle 36\rangle\langle 14\rangle)}{\Delta_{13|24|56}\langle 1|2+4|3\rangle^2\langle 2|1+3|4\rangle} + \\
& \frac{[35]\langle 16\rangle\langle 14\rangle(s_{124}-s_{234})[24](-6[14]\langle 34\rangle+6[12]\langle 23\rangle)}{\Delta_{13|24|56}\langle 1|2+4|3\rangle^2\langle 2|1+3|4\rangle} + \\
& \frac{24[25][14]\langle 16\rangle\langle 14\rangle}{\langle 1|2+4|3\rangle^2\langle 2|1+3|4\rangle} + \\
& \frac{[45]\langle 14\rangle(14[23]\langle 26\rangle\langle 13\rangle-14\langle 46\rangle[34]\langle 13\rangle-14[14]\langle 16\rangle\langle 14\rangle)}{\langle 12\rangle\langle 1|2+4|3\rangle^2\langle 2|1+3|4\rangle} + \\
& \frac{\langle 16\rangle\langle 14\rangle(6[14][24]\langle 46\rangle-8[12]\langle 36\rangle[34]-8\langle 16\rangle[14][12])}{\langle 56\rangle\langle 1|2+4|3\rangle^2\langle 2|1+3|4\rangle} + \\
& \frac{[23]\langle 16\rangle(-14\langle 36\rangle\langle 24\rangle[24] \dots \langle 4 \text{ terms} \rangle \dots +14[14]\langle 46\rangle\langle 13\rangle)}{\langle 56\rangle\langle 1|2+4|3\rangle^2\langle 2|1+3|4\rangle} + \\
& \frac{\langle 6|1+3|5\rangle(7/2[23]^2\langle 34\rangle\langle 13\rangle-3/2[12]\langle 14\rangle^2[24]-5[23][12]\langle 14\rangle\langle 13\rangle)}{\Delta_{13|24|56}\langle 1|2+4|3\rangle^2} + \\
& \frac{5[25]\langle 16\rangle\langle 14\rangle[14]\langle 4|1+3|2\rangle}{\Delta_{13|24|56}\langle 1|2+4|3\rangle^2} + \\
& \frac{[25]\langle 14\rangle(s_{124}-s_{234})(-1[23]\langle 36\rangle-4\langle 16\rangle[12])}{\Delta_{13|24|56}\langle 1|2+4|3\rangle^2} + \\
& \frac{\langle 24\rangle[45]\langle 13\rangle[14](-14[45]\langle 14\rangle-22[35]\langle 13\rangle)}{\langle 12\rangle[56]\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle^2} + \\
& \frac{[45][23]\langle 13\rangle\langle 23\rangle(-10[45]\langle 24\rangle-2[35]\langle 23\rangle)}{\langle 12\rangle[56]\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle^2} + \\
& \frac{9/2\langle 6|1+3|5\rangle\langle 3|1+2|3\rangle[24]\langle 23\rangle(s_{14}-s_{23})}{\Delta_{13|24|56}\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle^2} + \\
& \frac{(s_{14}-s_{23})(s_{123}-s_{134})(9/2[35]\langle 36\rangle[24]\langle 23\rangle \dots \langle 3 \text{ terms} \rangle \dots -4[14][45]\langle 46\rangle\langle 13\rangle)}{\Delta_{13|24|56}\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle^2} + \\
& \frac{[45][14]\langle 4|45\rangle\langle 34\rangle\langle 14\rangle \dots \langle 3 \text{ terms} \rangle \dots +24[15]\langle 14\rangle\langle 13\rangle}{[56]\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle^2} + \\
& \frac{[45]\langle 23\rangle(-24[13][25]\langle 13\rangle+24[35][12]\langle 13\rangle+20[23]\langle 34\rangle[45]-18[23][25]\langle 23\rangle)}{[56]\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle^2} + \\
& \frac{16[45][35]\langle 24\rangle\langle 13\rangle^2}{\langle 12\rangle^2[56]\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{\langle 13\rangle[45](-2[35]\langle 34\rangle-18[25]\langle 24\rangle-10[15]\langle 14\rangle)}{\langle 12\rangle[56]\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{-3/2\langle 1|2+3|4\rangle\langle 6|1+3|5\rangle(s_{12}+s_{14}+s_{23}+s_{34})\langle 3|2+4|1\rangle\langle 4|1+3|2\rangle}{\Delta_{13|24|56}^2\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{-3/8\langle 1|3+4|2\rangle(s_{123}-s_{134})\langle 6|1+3|5\rangle(s_{12}+s_{14}+s_{23}+s_{34})\langle 3|2+4|1\rangle}{\Delta_{13|24|56}^2\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{-3/8\langle 3|1+2|4\rangle\langle 6|1+3|5\rangle(s_{124}-s_{234})(s_{12}+s_{14}+s_{23}+s_{34})\langle 4|1+3|2\rangle}{\Delta_{13|24|56}^2\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{\langle 36\rangle(s_{13}-s_{24})\langle 46\rangle(3[23][24]\langle 23\rangle \dots \langle 3 \text{ terms} \rangle \dots +5[14]\langle 14\rangle[24])}{\langle 56\rangle\Delta_{13|24|56}\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{[25][35](s_{13}-s_{24})(-3\langle 34\rangle[24]\langle 23\rangle-5[14]\langle 34\rangle\langle 13\rangle+2\langle 23\rangle[12]\langle 13\rangle)}{[56]\Delta_{13|24|56}\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{131/4[14]^2[25]\langle 36\rangle\langle 14\rangle^2 \dots \langle 53 \text{ terms} \rangle \dots -4[12][25][23]\langle 13\rangle\langle 23\rangle\langle 26\rangle}{\Delta_{13|24|56}\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{-23\langle 36\rangle[24]\langle 46\rangle}{\langle 56\rangle\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{\langle 36\rangle(-43[23]\langle 36\rangle+17\langle 16\rangle[12])}{\langle 56\rangle\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{-6\langle 34\rangle[25][45]}{[56]\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{8[25]^2\langle 23\rangle}{[56]\langle 1|2+4|3\rangle\langle 2|1+3|4\rangle} + \\
& \frac{-9/2\langle 6|1+3|5\rangle[12][24]\langle 23\rangle^2}{\Delta_{13|24|56}\langle 2|1+3|4\rangle^2} + \\
& \frac{\langle 36\rangle(s_{123}-s_{134})(-9/2[14][25]\langle 23\rangle+9/2[12][45]\langle 23\rangle-5/2[14]\langle 34\rangle[45])}{\Delta_{13|24|56}\langle 2|1+3|4\rangle^2}
\end{aligned}$$