

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