

$$\begin{aligned}
& \frac{-7/4[3|1+4|2]\langle 4|2+3|1\rangle\langle 6|1+4|5\rangle}{\Delta_{14|23|56}^2} + \\
& \frac{1/2[12]^2\langle 6|1+4|5\rangle}{[14][23]\Delta_{14|23|56}} + \\
& \frac{1/2\langle 34\rangle^2\langle 6|1+4|5\rangle}{\langle 14\rangle\langle 23\rangle\Delta_{23|14|56}} + \\
& \frac{-1/2[12][24]\langle 6|1+4|5\rangle(s_{23}-s_{56})}{[14][23]\langle 1|2+3|4\rangle\Delta_{14|23|56}} + \\
& \frac{1/2\langle 13\rangle\langle 34\rangle\langle 6|1+4|5\rangle(s_{23}-s_{56})}{\langle 14\rangle\langle 23\rangle\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{\langle 13\rangle\langle 34\rangle(-3/4[14]\langle 6|1+4|5\rangle-1/2[14][45]\langle 46\rangle-1/4[15][45]\langle 56\rangle)}{\langle 23\rangle\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{-1/2[14]\langle 34\rangle\langle 36\rangle\langle 46\rangle}{\langle 23\rangle\langle 56\rangle\Delta_{23|14|56}} + \\
& \frac{[12][24](1/4\langle 14\rangle\langle 6|1+4|5\rangle+1/2[14][45]\langle 46\rangle-1/4\langle 16\rangle\langle 46\rangle[56])}{[23]\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{1/2[15][25]\langle 4|1+3|2\rangle}{[23][56]\Delta_{23|14|56}} + \\
& \frac{-1/4\langle 34\rangle\langle 36\rangle[45](s_{14}-s_{56})}{\langle 23\rangle\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{-1/3\langle 36\rangle^2 s_{234}(s_{14}-s_{56})}{\langle 23\rangle\langle 56\rangle\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{1/4\langle 34\rangle^2[45]^2(s_{14}-s_{56})}{\langle 23\rangle[56]\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{1/4[24][25]\langle 46\rangle(s_{14}-s_{56})}{[23]\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{-1/12[25]^2 s_{234}(s_{14}-s_{56})}{[23][56]\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{1/4[24]^2\langle 46\rangle^2(s_{14}-s_{56})}{[23]\langle 56\rangle\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{[12][24][45](s_{23}-s_{56})(-1/4\langle 46\rangle[56]+1/4\langle 4|1+6|5\rangle)}{[14][23][56]\langle 1|2+3|4\rangle\Delta_{14|23|56}} + \\
& \frac{\langle 13\rangle\langle 34\rangle\langle 46\rangle(s_{23}-s_{56})(1/4[45]\langle 56\rangle+1/4\langle 6|1+5|4\rangle)}{\langle 14\rangle\langle 23\rangle\langle 56\rangle\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{-1/3[12]^2\langle 14\rangle[45]^2}{[14][23][56]\langle 1|2+3|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{\langle 13\rangle\langle 34\rangle(2\langle 6|1+4|5\rangle+2/3[45]\langle 46\rangle)}{\langle 14\rangle\langle 23\rangle\langle 1|2+3|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{4/3\langle 13\rangle\langle 34\rangle\langle 46\rangle\langle 6|1+5|4\rangle}{\langle 14\rangle\langle 23\rangle\langle 56\rangle\langle 1|2+3|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{\langle 3|1+2|5\rangle(27\langle 34\rangle[45]-28\langle 36\rangle[56])}{\langle 23\rangle[56]\langle 1|2+3|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{\langle 3|1+2|5\rangle(1/3\langle 36\rangle\langle 56\rangle[56]^2-1/3\langle 34\rangle^2[34][45]-1/3\langle 24\rangle[24]\langle 34\rangle[45])}{\langle 23\rangle[56]\langle 1|2+3|1\rangle\langle 1|5+6|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{[12]\langle 6|1+3|2\rangle(-1/3[14][45]\langle 56\rangle+5/3\langle 46\rangle\langle 1|2+3|4\rangle)}{[23]\langle 56\rangle\langle 1|2+3|1\rangle\langle 1|5+6|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{5/12[12]\langle 36\rangle\langle 46\rangle}{\langle 56\rangle\Delta_{23|14|56}} + \\
& \frac{1/4[15][25]\langle 34\rangle}{[56]\Delta_{23|14|56}} + \\
& \frac{[24]\langle 46\rangle(1/4\langle 36\rangle\langle 4|2+3|4\rangle+1/3\langle 46\rangle\langle 3|1+2|4\rangle+1/2\langle 23\rangle[24]\langle 46\rangle)}{\langle 56\rangle\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{[45](1/4[24]\langle 34\rangle\langle 4|1+6|5\rangle+1/4[23]\langle 34\rangle^2[45]+1/6\langle 23\rangle[25]\langle 4|1+3|2\rangle)}{[56]\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{\langle 36\rangle(s_{14}-s_{23})(1/3[23]\langle 36\rangle+1/4[24]\langle 46\rangle)}{\langle 56\rangle\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{[25](s_{14}-s_{23})(-1/2\langle 34\rangle[45]+1/12\langle 23\rangle[25])}{[56]\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{-13/12[12]\langle 14\rangle\langle 36\rangle[45]\dots\langle 10\text{ terms}\rangle\dots-3/4[23]\langle 34\rangle\langle 36\rangle[45]}{\langle 1|2+3|4\rangle\Delta_{23|14|56}} + \\
& \frac{4/3\langle 36\rangle\langle 6|1+5|2\rangle}{\langle 56\rangle\langle 1|2+3|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{\langle 36\rangle(5/3[23]\langle 36\rangle+10/3[24]\langle 46\rangle)}{\langle 56\rangle\langle 1|5+6|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{-5/3\langle 13\rangle[14][24]\langle 46\rangle^2}{\langle 56\rangle\langle 1|2+3|1\rangle\langle 1|5+6|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{[25](83/3\langle 34\rangle[45]-1/3\langle 23\rangle[25])}{[56]\langle 1|2+3|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{1/3[23]\langle 34\rangle^2[45]^2}{[56]\langle 1|2+3|1\rangle\langle 1|5+6|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{-337/9[25]\langle 36\rangle}{\langle 1|2+3|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{-67/9[25]\langle 36\rangle}{\langle 1|5+6|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{-82/9[23]\langle 36\rangle^2[56]\dots\langle 10\text{ terms}\rangle\dots+82/9[24]\langle 34\rangle[45]\langle 46\rangle}{\langle 1|2+3|1\rangle\langle 1|5+6|1\rangle\langle 1|2+3|4\rangle}
\end{aligned}$$