

$$\begin{aligned}
& \frac{-1/6\langle 12\rangle\langle 13\rangle[15]^2[23]^2}{\langle 23\rangle[56]\langle 1|2+3|1\rangle^2\langle 1|2+3|4\rangle} + \\
& \frac{-3\langle 34\rangle[35]^2s_{123}}{\langle 12\rangle\langle 23\rangle[56]\langle 3|5+6|3\rangle^2} + \\
& \frac{1/6[23]\langle 34\rangle[45]\langle 46\rangle\langle 2|1+3|4\rangle}{\langle 23\rangle^2\langle 1|2+3|4\rangle\langle 4|5+6|4\rangle^2} + \\
& \frac{4/3[12]\langle 23\rangle\langle 34\rangle[35]^2}{\langle 23\rangle^2[56]\langle 3|1+2|3\rangle\langle 3|5+6|3\rangle} + \\
& \frac{[23][15](1/3\langle 13\rangle[35]+2/3\langle 12\rangle[25])}{\langle 23\rangle[56]\langle 1|2+3|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{1/2\langle 12\rangle\langle 13\rangle[15]^2[23]}{\langle 23\rangle^2[56]\langle 1|2+3|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{2[35]\langle 46\rangle}{\langle 12\rangle\langle 23\rangle\langle 3|5+6|3\rangle} + \\
& \frac{1[35]\langle 36\rangle s_{123}}{\langle 12\rangle\langle 23\rangle\langle 3|5+6|3\rangle\langle 3|1+2|4\rangle} + \\
& \frac{2/3\langle 12\rangle[12][35]\langle 36\rangle}{\langle 12\rangle\langle 23\rangle\langle 3|5+6|3\rangle\langle 3|1+2|4\rangle} + \\
& \frac{-1\langle 34\rangle[35][45]s_{123}}{\langle 12\rangle\langle 23\rangle[56]\langle 3|5+6|3\rangle\langle 3|1+2|4\rangle} + \\
& \frac{2\langle 23\rangle[25]\langle 34\rangle[35]}{\langle 13\rangle\langle 23\rangle^2[56]\langle 3|5+6|3\rangle} + \\
& \frac{-1[34]\langle 36\rangle\langle 46\rangle s_{123}}{\langle 12\rangle\langle 23\rangle\langle 56\rangle\langle 3|5+6|3\rangle\langle 3|1+2|4\rangle} + \\
& \frac{2\langle 14\rangle[34]\langle 36\rangle\langle 46\rangle}{\langle 12\rangle\langle 13\rangle\langle 23\rangle\langle 56\rangle\langle 3|5+6|3\rangle} + \\
& \frac{2\langle 36\rangle\langle 46\rangle}{\langle 13\rangle\langle 23\rangle^2\langle 56\rangle} + \\
& \frac{1/3\langle 12\rangle[25]\langle 46\rangle}{\langle 12\rangle\langle 23\rangle\langle 34\rangle\langle 1|2+3|4\rangle} + \\
& \frac{-1/3\langle 36\rangle\langle 4|1+2|5\rangle}{\langle 12\rangle\langle 23\rangle\langle 34\rangle\langle 3|1+2|4\rangle} + \\
& \frac{1/3\langle 12\rangle[12]\langle 14\rangle\langle 36\rangle[45]}{\langle 12\rangle\langle 23\rangle\langle 34\rangle\langle 1|2+3|4\rangle\langle 3|1+2|4\rangle} + \\
& \frac{-1/3[12][13]\langle 24\rangle\langle 46\rangle^2\langle 1|2+3|4\rangle}{\langle 12\rangle\langle 23\rangle\langle 56\rangle\langle 4|2+3|1\rangle((\langle 3|2|5+6|4|3\rangle-(\langle 2|1|5+6|4|2\rangle))} + \\
& \frac{-1/3[23][45]\langle 46\rangle}{\langle 23\rangle\langle 1|2+3|4\rangle\langle 4|5+6|4\rangle} + \\
& \frac{1/2\langle 24\rangle[45]\langle 6|1+5|2\rangle}{\langle 23\rangle^2\langle 1|2+3|4\rangle\langle 4|5+6|4\rangle} + \\
& \frac{1/2[23]\langle 36\rangle\langle 46\rangle\langle 2|1+3|4\rangle}{\langle 23\rangle^2\langle 56\rangle\langle 1|2+3|4\rangle s_{123}} + \\
& \frac{1/2[13]\langle 34\rangle[45]\langle 46\rangle\langle 56\rangle}{\langle 23\rangle^2\langle 56\rangle\langle 4|5+6|4\rangle s_{123}} + \\
& \frac{1/3[45]\langle 46\rangle}{\langle 12\rangle\langle 23\rangle\langle 3|1+2|4\rangle} + \\
& \frac{2/3[35]\langle 36\rangle}{\langle 12\rangle\langle 23\rangle\langle 3|1+2|4\rangle} + \\
& \frac{[45]\langle 16\rangle(-1/3\langle 34\rangle[34]-1/3\langle 12\rangle[12])}{\langle 12\rangle\langle 23\rangle\langle 1|2+3|4\rangle\langle 3|1+2|4\rangle} + \\
& \frac{1/3[45]\langle 46\rangle s_{123}}{\langle 12\rangle\langle 23\rangle\langle 3|1+2|4\rangle\langle 4|5+6|4\rangle} + \\
& \frac{-1/3\langle 34\rangle[45]^2\langle 1|2+4|3\rangle}{\langle 12\rangle\langle 23\rangle[56]\langle 1|2+3|4\rangle\langle 3|1+2|4\rangle} + \\
& \frac{-1/2\langle 14\rangle[14][45]\langle 46\rangle}{\langle 23\rangle^2\langle 1|2+3|4\rangle\langle 4|5+6|4\rangle} + \\
& \frac{-1/3[15]^2[23]\langle 34\rangle s_{123}}{[12]\langle 23\rangle^2[56](\langle 2|3|5+6|1|2\rangle-\langle 3|4|5+6|1|3\rangle)} + \\
& \frac{-1/3[23]\langle 24\rangle\langle 46\rangle\langle 6|1+3|4\rangle}{\langle 12\rangle\langle 23\rangle\langle 56\rangle((\langle 3|2|5+6|4|3\rangle-(\langle 2|1|5+6|4|2\rangle))} + \\
& \frac{1/3\langle 24\rangle[24]\langle 26\rangle\langle 46\rangle\langle 1|2+3|1\rangle}{\langle 12\rangle\langle 23\rangle^2\langle 56\rangle((\langle 3|2|5+6|4|3\rangle-(\langle 2|1|5+6|4|2\rangle))} + \\
& \frac{-5/3\langle 26\rangle\langle 46\rangle}{\langle 12\rangle\langle 23\rangle^2\langle 56\rangle} + \\
& \frac{1/3[15][25]s_{123}}{[12]\langle 23\rangle^2[56]\langle 1|2+3|4\rangle} + \\
& \frac{-1/3\langle 6|1+4|5\rangle}{\langle 23\rangle^2\langle 1|2+3|4\rangle} + \\
& \frac{1/3[45]\langle 4|1+6|5\rangle}{\langle 23\rangle^2[56]\langle 1|2+3|4\rangle} + \\
& \frac{1/2[45]\langle 46\rangle}{\langle 23\rangle^2\langle 1|2+3|4\rangle} + \\
& \frac{1/2[23]\langle 26\rangle\langle 36\rangle}{\langle 23\rangle^2\langle 56\rangle\langle 1|2+3|4\rangle}
\end{aligned}$$