

$$\begin{aligned}
& \frac{1/2[12]^2\langle 13\rangle[14]\langle 46\rangle^2}{[13]\langle 56\rangle(1/2+3/1)^2\langle 4|5+6|4\rangle} + \\
& \frac{-6[12]^2\langle 13\rangle[15]^2}{[13][14][56](1/2+3/1)^2} + \\
& \frac{1/2(13)^2\langle 34\rangle[45]\langle 46\rangle\langle 4|2+3|1\rangle}{(12)\langle 14\rangle\langle 23\rangle\langle 1|2+3|1\rangle\langle 4|5+6|4\rangle^2} + \\
& \frac{1/2(13)\langle 24\rangle[45]\langle 46\rangle\langle 4|2+3|1\rangle}{(12)\langle 34\rangle\langle 1|2+3|1\rangle\langle 4|5+6|4\rangle^2} + \\
& \frac{1/2[12]\langle 24\rangle[45]\langle 46\rangle\langle 4|1+3|2\rangle}{[23]\langle 34\rangle\langle 1|2+3|1\rangle\langle 4|5+6|4\rangle^2} + \\
& \frac{[12]\langle 46\rangle(3/2[12]\langle 13\rangle\langle 14\rangle[34][35] \dots \langle 5 \text{ terms} \rangle \dots -3/2(12)[13]\langle 14\rangle[24][25])}{(12)[13]\langle 14\rangle[23][34]\langle 1|2+3|1\rangle\langle 4|5+6|4\rangle} + \\
& \frac{-3/2[12][13]\langle 14\rangle^2[23]\langle 36\rangle[45]}{(12)\langle 13\rangle\langle 14\rangle[23][34]\langle 1|2+3|1\rangle\langle 4|5+6|4\rangle} + \\
& \frac{[12][45][24][13]\langle 46\rangle(-3/2(12)[12]+3/2(34)[34])}{(12)\langle 13\rangle[14][23][34]\langle 1|2+3|1\rangle\langle 4|5+6|4\rangle} + \\
& \frac{3/2[12]^2\langle 23\rangle\langle 24\rangle[24]\langle 26\rangle[45]}{(12)\langle 13\rangle[14][23][34]\langle 1|2+3|1\rangle\langle 4|5+6|4\rangle} + \\
& \frac{(13)^2[13](-7(13)[13]^2[23]\langle 24\rangle[45]\langle 46\rangle \dots \langle 6 \text{ terms} \rangle \dots -5/2[12][13]\langle 14\rangle[24]^2\langle 26\rangle[35])}{(12)\langle 13\rangle\langle 14\rangle[14][23][34]\langle 56\rangle[56]\langle 1|2+3|1\rangle\langle 1|2+3|4\rangle} + \\
& \frac{[12]\langle 3/2(23)^2[23]^2[24][35]\langle 46\rangle \dots \langle 52 \text{ terms} \rangle \dots +3/2(12)[13]\langle 14\rangle[14][24][25]\langle 46\rangle}{(12)\langle 13\rangle\langle 14\rangle[14][23][34]\langle 56\rangle[56]\langle 1|2+3|1\rangle} + \\
& \frac{3(13)\langle 34\rangle^2[45]\langle 46\rangle}{(12)\langle 14\rangle\langle 23\rangle\langle 4|5+6|4\rangle^2} + \\
& \frac{\langle 46\rangle[13](-1[12]\langle 13\rangle^3[14][34]^2\langle 46\rangle \dots \langle 8 \text{ terms} \rangle \dots +6[12]\langle 13\rangle^2\langle 23\rangle[24][34]^2\langle 46\rangle)}{(12)\langle 13\rangle\langle 14\rangle[14]\langle 23\rangle[23][34]\langle 56\rangle\langle 1|2+3|4\rangle\langle 4|5+6|4\rangle} + \\
& \frac{-6(23)\langle 45\rangle^2\langle 4|1+3|2\rangle}{(12)\langle 34\rangle[56]\langle 2|1+3|4\rangle\langle 4|5+6|4\rangle} + \\
& \frac{\langle 46\rangle(3/2(12)[12]^2\langle 14\rangle[14][34]\langle 36\rangle \dots \langle 23 \text{ terms} \rangle \dots +3/2(12)[12][13]\langle 14\rangle[14][24]\langle 36\rangle)}{(12)\langle 13\rangle\langle 14\rangle[14]\langle 23\rangle[23][34]\langle 56\rangle\langle 4|5+6|4\rangle} + \\
& \frac{-1/2[23]\langle 3|1+2|5\rangle^2}{(12)\langle 34\rangle[56]\langle 3|1+2|3\rangle^2} + \\
& \frac{9/2[12]\langle 35\rangle\langle 3|1+2|5\rangle}{(12)\langle 13\rangle[34][56]\langle 3|1+2|3\rangle} + \\
& \frac{-1[25]\langle 3|1+2|5\rangle}{(12)\langle 34\rangle[56]\langle 3|1+2|3\rangle} + \\
& \frac{21/2\langle 34\rangle\langle 36\rangle^2 s_{123}}{(12)\langle 23\rangle\langle 56\rangle\langle 3|5+6|3\rangle^2} + \\
& \frac{7/2[35]\langle 36\rangle\langle 4|1+2|3\rangle s_{123}}{\langle 1|2+4|3\rangle\langle 2|1+4|3\rangle^2\langle 3|5+6|3\rangle} + \\
& \frac{s_{123}[35]\langle 5/2(14)\langle 36\rangle-7/2(13)\langle 46\rangle\rangle}{(12)\langle 1|2+4|3\rangle\langle 2|1+4|3\rangle\langle 3|5+6|3\rangle} + \\
& \frac{s_{123}[35]\langle -1(34)\langle 45\rangle-5/2(13)\langle 15\rangle\rangle}{(12)\langle 34\rangle[56]\langle 2|1+4|3\rangle\langle 3|5+6|3\rangle} + \\
& \frac{-5/2(13)[25][35] s_{123}}{(12)\langle 34\rangle[56]\langle 1|2+4|3\rangle\langle 3|5+6|3\rangle} + \\
& \frac{7/2\langle 6|1+4|5\rangle(s_{124}-s_{134}) s_{123}(s_{13}-s_{24})}{(1|2+3|4)\langle 2|1+4|3\rangle^2\Delta_{14|23|56}} + \\
& \frac{-21/2\langle 24\rangle\langle 26\rangle\langle 36\rangle s_{123}}{(12)\langle 23\rangle\langle 56\rangle\langle 2|1+4|3\rangle^2} + \\
& \frac{7/4(13)[35]\langle 3|1+4|2\rangle(s_{123}-s_{234})\langle 16\rangle(s_{13}-s_{24})}{(14)\langle 1|2+3|4\rangle^2\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{49/32\langle 3|1+4|2\rangle\langle 6|1+4|5\rangle s_{123}(s_{124}-s_{134})(s_{123}-s_{234})}{\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}^2} + \\
& \frac{-21/8(13)\langle 23\rangle[23]\langle 34\rangle\langle 6|1+4|5\rangle(s_{124}-s_{134})}{(14)\langle 23\rangle\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{(13)\langle 46\rangle(s_{124}-s_{134})(s_{23}-s_{56})\langle 7/16(13)[15]+21/16(23)[25]+7/8(34)[45]\rangle}{(14)\langle 23\rangle\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{-35/8(13)[35]\langle 46\rangle\langle 3|1+4|2\rangle(s_{23}-s_{56})}{(14)\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{(s_{124}-s_{134})(s_{23}-s_{56})\langle -7/8[23]\langle 34\rangle\langle 36\rangle[45]+7/8(13)[13][25]\langle 36\rangle+7/8(12)[12][25]\langle 36\rangle+7/8(23)[24][25]\langle 46\rangle\rangle}{(14)\langle 14\rangle\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{(13)\langle 46\rangle(s_{124}-s_{134})(s_{23}-s_{56})\langle -7/16(34)[34]\langle 36\rangle-7/16(24)[24]\langle 36\rangle+7/8(13)[14]\langle 46\rangle\rangle}{(14)\langle 23\rangle\langle 56\rangle\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{-7/8(13)\langle 34\rangle\langle 46\rangle^2\langle 3|1+4|2\rangle(s_{23}-s_{56})}{(14)\langle 56\rangle\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{7/8[12]\langle 23\rangle[24]\langle 6|1+4|5\rangle(s_{124}-s_{134})}{[14]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{7/16[12][45](s_{124}-s_{134})\langle 36\rangle(s_{23}-s_{56})}{[14]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{-7/16[12][24][45]\langle 46\rangle(s_{124}-s_{134})(s_{23}-s_{56})}{[14][23]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{-7/8[12][35][45]\langle 3|1+4|2\rangle s_{123}(s_{23}-s_{56})}{[14][23][56]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{7/16[12]\langle 34\rangle[45]^2(s_{124}-s_{134})(s_{23}-s_{56})}{[14][56]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{-7/16\langle 36\rangle\langle 46\rangle[56]\langle 3|1+2|4\rangle(s_{124}-s_{134})}{(23)\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{21/16\langle 34\rangle[45]\langle 46\rangle\langle 3|1+2|4\rangle(s_{124}-s_{134})}{(23)\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{-21/16\langle 36\rangle\langle 3|1+2|5\rangle\langle 4|2+3|4\rangle(s_{124}-s_{134})}{(23)\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{(s_{124}-s_{134})\langle 36\rangle(s_{14}-s_{56})\langle -21/32(24)[24]^2\langle 46\rangle \dots \langle 5 \text{ terms} \rangle \dots -7/32[12]\langle 14\rangle[34]\langle 36\rangle\rangle}{(23)[23]\langle 56\rangle\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{[34]\langle 3|1+4|2\rangle\langle 36\rangle(s_{14}-s_{56})\langle -21/16(34)[34]\langle 46\rangle-21/16[13]\langle 14\rangle\langle 36\rangle\rangle}{(23)[23]\langle 56\rangle\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{\langle 34\rangle(s_{124}-s_{134})[45](s_{14}-s_{56})\langle 21/16(24)[34][35]+21/32(24)[24][25]-7/32[23]\langle 34\rangle[45]\rangle}{(23)[23][56]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{21/16\langle 34\rangle^2[34][35][45]\langle 3|1+4|2\rangle(s_{14}-s_{56})}{(23)[23][56]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{-7/8\langle 46\rangle^2\langle 3|1+2|4\rangle^2(s_{124}-s_{134})}{(23)\langle 56\rangle\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{-7/16[24][25]\langle 46\rangle s_{123}(s_{124}-s_{134})}{[23]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{-7/8[24][25]\langle 4|1+6|5\rangle s_{123}(s_{124}-s_{134})}{[23][56]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{(14)[24][12](s_{124}-s_{134})\langle -7/16[25]\langle 26\rangle-7/16[35]\langle 36\rangle+7/16[45]\langle 46\rangle\rangle}{[23]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{[25](s_{124}-s_{134})(s_{14}-s_{56})\langle -7/32[24]\langle 46\rangle-21/32[12]\langle 16\rangle\rangle}{[23]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{[24][25](s_{14}-s_{56})\langle -7/16(24)[24]\langle 46\rangle-7/16[12]\langle 14\rangle\langle 26\rangle\rangle}{[23]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{(s_{124}-s_{134})(s_{14}-s_{56})\langle -35/32(24)[24]^2[25]\langle 46\rangle \dots \langle 3 \text{ terms} \rangle \dots +35/32[12]^2\langle 14\rangle\langle 16\rangle[45]\rangle}{[23]\langle 56\rangle[56]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{\langle 3|1+4|2\rangle\langle -539/16[23]\langle 24\rangle^2[24]^2[35]\langle 36\rangle \dots \langle 59 \text{ terms} \rangle \dots -7/8(23)[23]\langle 24\rangle[24]^2[35]\langle 46\rangle\rangle}{[23]\langle 56\rangle[56]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{[25][24](s_{14}-s_{56})\langle -7/16[13]\langle 14\rangle[34]\langle 45\rangle-7/8(12)[13][25]\langle 34\rangle-7/8(12)[12]\langle 24\rangle[25]\rangle}{[23][56]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{(s_{124}-s_{134})\langle 35/32(14)^2[14]^2[25]\langle 36\rangle \dots \langle 59 \text{ terms} \rangle \dots -217/64(13)[13]\langle 23\rangle[23][25]\langle 36\rangle\rangle}{(56)[56]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{7/8(13)[13]\langle 14\rangle^2[14]^2[25]\langle 36\rangle \dots \langle 45 \text{ terms} \rangle \dots +7/16[12]\langle 13\rangle^2[13][23]\langle 24\rangle\langle 36\rangle[45]}{(56)[56]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{119/16[12]^2\langle 13\rangle^2\langle 24\rangle^2[24]\langle 26\rangle[34]^2[35] \dots \langle 111 \text{ terms} \rangle \dots -119/16(13)[13]\langle 23\rangle^2[23]^2\langle 34\rangle[34]^2[45]\langle 46\rangle}{(12)\langle 13\rangle\langle 14\rangle[14]\langle 23\rangle[23][34]\langle 56\rangle[56]\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle} + \\
& \frac{-7/8(34)\langle 46\rangle\langle 3|1+4|5\rangle(s_{124}-s_{134})}{(14)\langle 23\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{7/2(23)\langle 34\rangle[35]\langle 46\rangle\langle 3|1+4|2\rangle}{(14)\langle 23\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{-7/8[12][15]\langle 36\rangle(s_{124}-s_{134})}{[14]\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{7/8[12][25]\langle 6|2+3|1\rangle(s_{124}-s_{134})}{[14][23]\langle 2|1+4|3\rangle\Delta_{14|23|56}} + \\
& \frac{-7/2(16)[35]\langle 4|1+3|2\rangle s_{123}}{(12)\langle 23\rangle\langle 56\rangle[56]\langle 1|2+4|3\rangle\langle 2|1+4|3\rangle} + \\
& \frac{-7/2(13)^2[13]^3\langle 23\rangle[24][35]\langle 46\rangle \dots \langle 141 \text{ terms} \rangle \dots -119/16(12)[12]^2\langle 23\rangle^2[23]^2\langle 26\rangle[35]}{(12)\langle 13\rangle\langle 14\rangle[14]\langle 23\rangle[23][34]\langle 56\rangle[56]\langle 2|1+4|3\rangle} + \\
& \frac{7/4(13)\langle 16\rangle[25]\langle 3|1+4|2\rangle(s_{123}-s_{234})}{(14)\langle 1|2+3|4\rangle^2\Delta_{14|23|56}} + \\
& \frac{7[12]\langle 13\rangle\langle 16\rangle[24][45]}{(14)[14][34]\langle 1|2+3|4\rangle^2} + \\
& \frac{-6[12]\langle 16\rangle[35]\langle 1|3+4|2\rangle s_{123}}{(12)\langle 13\rangle[23]\langle 56\rangle[56]\langle 1|2+4|3\rangle\langle 1|2+3|4\rangle} + \\
& \frac{359/16(12)^2[12]^2\langle 14\rangle[14][24][35]\langle 36\rangle \dots \langle 232 \text{ terms} \rangle \dots +7/2(23)[23][24]\langle 34\rangle^2[34]^2[35]\langle 36\rangle}{(12)\langle 13\rangle\langle 14\rangle[14]\langle 23\rangle[23][34]\langle 56\rangle[56]\langle 1|2+3|4\rangle}
\end{aligned}$$