

$$\begin{aligned} & \frac{7/16(s_{13}-s_{24})[24](26)(13)\langle 4|2+3|1\rangle\langle 3|1+4|2\rangle\langle 35\rangle}{(1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}^2} + \\ & \frac{1/8\langle 2|1+4|5\rangle(s_{23}-s_{56})\langle 34\rangle\langle 3|1+4|2\rangle\langle 23\rangle\langle 46\rangle}{(14)\Delta_{14|23|56}^2\langle 2|1+4|3\rangle} + \\ & \frac{-3/8\langle 2|3+4|1\rangle(s_{23}-s_{14})\langle 36\rangle\langle 3|1+4|2\rangle\langle 23\rangle\langle 46\rangle}{(56)\Delta_{14|23|56}^2\langle 2|1+4|3\rangle} + \\ & \frac{\langle 4|2+3|1\rangle\langle 13\rangle\langle 36\rangle\langle 3|1+4|2\rangle\langle -7/16[35][24]-7/16[23][45]\rangle}{(1|2+3|4\rangle\Delta_{14|23|56}^2} + \\ & (123456 \rightarrow -432165) + \\ & \frac{[24]\langle 34\rangle(-1[13][25]\langle 36\rangle-1[25][14]\langle 46\rangle+1[35]\langle 36\rangle[12]+1[45]\langle 46\rangle[12])}{[34]\langle 56\rangle[56]s_{234}\langle 4|2+3|4\rangle} + \\ & \frac{3[13]\langle 24\rangle\langle 26\rangle\langle 3|1+4|2\rangle\langle 35\rangle(s_{124}-s_{134})}{\Delta_{14|23|56}\langle 2|1+4|3\rangle^3} + \\ & \frac{5/2[13]\langle 24\rangle\langle 26\rangle\langle 3|1+4|2\rangle^2\langle 35\rangle(s_{124}-s_{134})}{\Delta_{14|23|56}^2\langle 2|1+4|3\rangle^2} + \\ & \frac{1[12]\langle 24\rangle\langle 26\rangle\langle 3|1+4|2\rangle\langle 35\rangle}{\Delta_{14|23|56}\langle 2|1+4|3\rangle^2} + \\ & \frac{-1(s_{13}-s_{24})[13]\langle 26\rangle\langle 13\rangle\langle 3|1+4|2\rangle\langle 35\rangle}{\Delta_{14|23|56}\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle^2} + \\ & \frac{-1[13]\langle 34\rangle\langle 36\rangle\langle 35\rangle(s_{124}-s_{134})}{\Delta_{14|23|56}\langle 2|1+4|3\rangle^2} + \\ & \frac{-1/2[13]\langle 26\rangle\langle 34\rangle\langle 25\rangle(s_{124}-s_{134})}{\Delta_{14|23|56}\langle 2|1+4|3\rangle^2} + \\ & \frac{[35](s_{124}-s_{134})(s_{13}-s_{24})(1/2\langle 24\rangle\langle 36\rangle[24]-1/2[24]\langle 23\rangle\langle 46\rangle-1/2\langle 26\rangle\langle 13\rangle[12])}{\Delta_{14|23|56}\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle^2} + \\ & \frac{\langle 26\rangle(s_{124}-s_{134})(1/2[13]\langle 36\rangle\langle 14\rangle[12]+1/2[13][24]\langle 34\rangle\langle 46\rangle-1/2[34]\langle 34\rangle\langle 46\rangle[12])}{(56)\Delta_{14|23|56}\langle 2|1+4|3\rangle^2} + \\ & \frac{[35](s_{124}-s_{134})(1[35]\langle 34\rangle^2[14]-1/2[13][25]\langle 23\rangle\langle 34\rangle-1/2(12)[15]\langle 34\rangle[12]+1/2\langle 24\rangle[15]\langle 13\rangle[12])}{[56]\Delta_{14|23|56}\langle 2|1+4|3\rangle^2} + \\ & \frac{-1[35]^2\langle 24\rangle\langle 3|1+4|2\rangle}{[56]\langle 1|2+4|3\rangle\langle 2|1+4|3\rangle^2} + \\ & \frac{-2[35][23]\langle 34\rangle\langle 26\rangle}{(1|2+4|3\rangle\langle 2|1+4|3\rangle^2} + \\ & \frac{-2[35]^2\langle 34\rangle\langle 2|3+4|2\rangle}{[56]\langle 1|2+4|3\rangle\langle 2|1+4|3\rangle^2} + \\ & \frac{-4[35]\langle 34\rangle[15]}{[56]\langle 2|1+4|3\rangle^2} + \\ & \frac{35/32\langle 6|1+4|5\rangle(s_{15}+s_{16}+s_{45}+s_{46})\langle 4|2+3|1\rangle\langle 3|1+4|2\rangle s_{23}(s_{134}-s_{124})}{\Delta_{14|23|56}^3\langle 2|1+4|3\rangle} + \\ & \frac{1/4[34]\langle 4|2+3|1\rangle\langle 13\rangle(s_{123}-s_{234})\langle 3|1+4|2\rangle\langle 6|1+4|5\rangle}{(1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}^2} + \\ & \frac{\langle 4|2+3|1\rangle(s_{123}-s_{234})\langle 3|1+4|2\rangle(-1/8[35]\langle 13\rangle\langle 36\rangle[34]-1/8[35][24]\langle 26\rangle\langle 13\rangle-1/2(12)[45]\langle 36\rangle\langle 23\rangle)}{(1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}^2} + \\ & \frac{-1/4\langle 6|1+4|5\rangle(s_{13}-s_{24})\langle 23\rangle\langle s_{123}-s_{234}\rangle\langle 3|1+4|2\rangle\langle 23\rangle}{(1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}^2} + \\ & \frac{3/8(s_{13}-s_{24})[24]\langle 23\rangle(s_{123}-s_{234})\langle 3|1+4|2\rangle\langle 35\rangle\langle 46\rangle}{(1|2+3|4\rangle\langle 2|1+4|3\rangle\Delta_{14|23|56}^2} + \\ & \frac{\langle 4|2+3|1\rangle\langle 3|1+4|2\rangle(-35/4(12)[15]\langle 16\rangle[12]\dots\langle 13\text{ terms}\rangle\dots+73/8[25]\langle 24\rangle\langle 26\rangle[24])}{\Delta_{14|23|56}^2\langle 2|1+4|3\rangle} + \\ & \frac{\langle 3|1+4|2\rangle(-3/8[12]\langle 24\rangle^2\langle 26\rangle[24][25]\dots\langle 9\text{ terms}\rangle\dots-8[34][12]\langle 23\rangle\langle 34\rangle[35]\langle 46\rangle)}{\Delta_{14|23|56}^2\langle 2|1+4|3\rangle} + \\ & \frac{\langle 4|2+3|1\rangle(s_{124}-s_{134})(1/2[45][23]\langle 34\rangle\langle 36\rangle\dots\langle 7\text{ terms}\rangle\dots+29/4[24]\langle 34\rangle[45]\langle 46\rangle)}{\Delta_{14|23|56}^2\langle 2|1+4|3\rangle} + \\ & \frac{(s_{124}-s_{134})(-65/8[12][24]\langle 23\rangle\langle 34\rangle[35]\langle 46\rangle\dots\langle 12\text{ terms}\rangle\dots+1/2[14][24]\langle 34\rangle^2[35]\langle 46\rangle)}{\Delta_{14|23|56}^2\langle 2|1+4|3\rangle} + \\ & \frac{\langle 13\rangle[24]\langle 6|1+4|5\rangle(s_{13}-s_{24})\langle -1/2[13]\langle 13\rangle-1/2[23]\langle 23\rangle\rangle}{\Delta_{14|23|56}\langle 1|2+3|4\rangle^2\langle 2|1+4|3\rangle} + \\ & \frac{-1/2[24]\langle 13\rangle^2(s_{13}-s_{24})(s_{123}-s_{234})[35]\langle 46\rangle}{(14)\Delta_{14|23|56}\langle 1|2+3|4\rangle^2\langle 2|1+4|3\rangle} + \\ & \frac{3/2(s_{13}-s_{24})[24]\langle 13\rangle\langle 34\rangle[35]\langle 46\rangle}{(14)\Delta_{14|23|56}\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle} + \\ & \frac{(s_{23}-s_{56})\langle 46\rangle(-1/2[14]\langle 24\rangle[24]\langle 13\rangle[25]\dots\langle 4\text{ terms}\rangle\dots+1/2\langle 24\rangle\langle 34\rangle[45][24]^2)}{(14)[14]\Delta_{14|23|56}\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle} + \\ & \frac{-1/2[12]\langle 24\rangle\langle 23\rangle[45]\langle 3|1+4|3\rangle\langle 46\rangle}{[14]\Delta_{14|23|56}\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle} + \\ & \frac{-1(s_{23}-s_{56})[12][24]\langle 23\rangle[45]\langle 46\rangle}{[14]\Delta_{14|23|56}\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle} + \\ & \frac{[24]\langle 26\rangle(1/4[24]\langle 23\rangle\langle 34\rangle[23]\langle 46\rangle\dots\langle 3\text{ terms}\rangle\dots-1/4[12]\langle 24\rangle[24]\langle 13\rangle\langle 46\rangle)}{(56)\Delta_{14|23|56}\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle} + \\ & \frac{\langle 26\rangle(s_{14}-s_{23})(-3/4[24][23]\langle 34\rangle\langle 36\rangle-3/4[24]^2\langle 34\rangle\langle 46\rangle+1/4[23]\langle 13\rangle\langle 36\rangle[12]+1/2[24]\langle 36\rangle\langle 14\rangle[12])}{(56)\Delta_{14|23|56}\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle} + \\ & \frac{\langle 36\rangle[34]\langle 46\rangle(s_{14}-s_{23})\langle -1/4[24]\langle 34\rangle+1/4(13)[12]\rangle}{(56)\Delta_{14|23|56}\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle} + \\ & \frac{-1/2[34](s_{14}-s_{23})\langle 34\rangle\langle 36\rangle^2[23]}{(56)\Delta_{14|23|56}\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle} + \\ & \frac{[25]\langle -1/8[14][24]\langle 12\rangle\langle 34\rangle^2[35]+1/2[14]\langle 14\rangle[12]\langle 12\rangle\langle 34\rangle[45]-3/8[14][34]\langle 14\rangle\langle 34\rangle^2[45]+1/8[25]\langle 12\rangle^2\langle 23\rangle[12]^2\rangle}{[56]\Delta_{14|23|56}\langle 1|2+3|4\rangle\langle 2|1+4|3\rangle} + \\ & \frac{[25](s_{14}-s_{23})(-11/8[45]\langle 34\rangle^2[34]\dots\langle 4\text{ terms}\rangle\dots+1/8[25]\langle 12\rangle\langle 23\rangle[12])}{[56]\Delta_{14|23|56}\langle 1|2+3$$