

$$\begin{aligned}
& \frac{-5/4(34)(3|1+4|2)(46)^2(34)^2(23)(23)(12)}{(14)(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)^2} + \\
& \frac{5/4(46)^2(34)[13](23)(23)(13)^2(s_{23}-s_{56})}{(14)(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)^2} + \\
& \frac{5/4(24)^2(46)(14)[14](26)(24)(s_{13}-s_{24})}{(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)^2} + \\
& \frac{(12)[24](46)(5/4(26)[12]^3(12)^2+5/4[13][12]^2(36)(12)^2-5/4[12](46)(14)[14]^2(12)+5/4(24)^2(46)[14][24]^2)}{(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)^2} + \\
& \frac{5/4(24)^2(46)(26)(24)(s_{23}-s_{14})(s_{13}-s_{24})}{(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)^2} + \\
& \frac{(46)(s_{23}-s_{14})(-5/4[12](46)[34]^2(23)(13)+5/2[12][34](26)(23)(23)(13)-5/4[24](14)[14][34](24)(36)+5/4[24]^2(14)[14](26)(24))}{(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)^2} + \\
& \frac{(s_{13}-s_{24})(-15/16[25](26)[13]^2(13)^2 \dots \langle 8 \text{ terms} \rangle \dots -5/8[12][45](26)[23](24)(13))}{(1|2+3|4)(2|1+4|3)^2\Delta_{14|23|56}} + \\
& \frac{-5/2(34)[35][24]^2(13)(24)(36)(12) \dots \langle 19 \text{ terms} \rangle \dots -5/45(14)(36)[13]^3(13)^2}{(1|2+3|4)(2|1+4|3)^2\Delta_{14|23|56}} + \\
& \frac{(24)[23](46)(3|1+4|2)(-45/8(24)(36)[34]+15/8(26)(24)[24]-15/4(46)(23)[34])}{(14)(56)\Delta_{14|23|56}(2|1+4|3)^2} + \\
& \frac{(46)(s_{23}-s_{56})(15/4(46)[13]23(13) \dots \langle 5 \text{ terms} \rangle \dots -5/8[24](46)[23](24)(23))}{(14)(56)\Delta_{14|23|56}(2|1+4|3)^2} + \\
& \frac{(46)(-5/2[24](36)[13][23](24)(23) \dots \langle 6 \text{ terms} \rangle \dots -55/16(46)[13]^2[14](13)^2)}{(56)\Delta_{14|23|56}(2|1+4|3)^2} + \\
& \frac{(46)(s_{23}-s_{14})(-85/16(24)[13](36)[24] \dots \langle 5 \text{ terms} \rangle \dots +185/16(24)(36)[12][34])}{(56)\Delta_{14|23|56}(2|1+4|3)^2} + \\
& \frac{-85/48[12][24][25](26)(24)^2 \dots \langle 26 \text{ terms} \rangle \dots +15/4[12]^2[35](46)(23)(12)}{(2|1+4|3)^2\Delta_{14|23|56}} + \\
& \frac{5/4[56](46)^2[14][23](24)(13)^3}{(14)^2(23)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)} + \\
& \frac{(13)^2(46)^2(s_{23}-s_{56})(-5/8(24)[13][24](13)+5/83412+5/4(34)(23)[23][34])}{(14)^2(23)(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)} + \\
& \frac{-5/8(46)^2[14]13^3(s_{23}-s_{56})}{(14)(23)(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)} + \\
& \frac{(46)^2(s_{23}-s_{56})(-5/8(34)(12)[24]^2-5/2(23)[24][23](13)+5/8[12][34](13)^2)}{(14)(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)} + \\
& \frac{-5/8[15](46)[14]13^3}{(23)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)} + \\
& \frac{(36)(s_{25}+s_{26}+s_{35}+s_{36})(5/8[45](34)^2[34]+5/8(24)[25][14](13)+5/8[45](24)(34)[24])}{(23)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)} + \\
& \frac{5/8(34)^2[35][45][14](13)(s_{25}+s_{26}+s_{35}+s_{36})}{(23)[56]\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)} + \\
& \frac{(46)(-55/8[24]^2(46)[13](23)(13) \dots \langle 14 \text{ terms} \rangle \dots +25/4[12][24](26)13^2)}{(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)} + \\
& \frac{(36)^2(23)(-5/4(34)(34)12-5/4(34)[13](12)[24]+5/4(34)^2[34]^2+5/4(24)[12][34](13))}{(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)} + \\
& \frac{[24](46)(s_{23}-s_{14})(15/2[13](36)(13) \dots \langle 3 \text{ terms} \rangle \dots +125/16(24)(36)[24])}{(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)} + \\
& \frac{(36)^2(23)(s_{23}-s_{14})(5/4(34)[34]+5/813)}{(56)\Delta_{14|23|56}(1|2+3|4)(2|1+4|3)} + \\
& \frac{-105/16[25](14)^2(36)[14]^2 \dots \langle 30 \text{ terms} \rangle \dots +835/36[12][35][24](46)(23)(13)}{(1|2+3|4)(2|1+4|3)\Delta_{14|23|56}} + \\
& \frac{-5/4(6|1+4|5)(34)^2(23)(s_{134}-s_{124})(s_{123}-s_{234})}{(14)\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{(34)(23)(46)(3|1+4|2)(s_{23}-s_{56})(25/16[45](24)-5/16(12)[15])}{(14)\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{25/16(34)(4|2+3|1)[45](46)[23](13)(s_{23}-s_{56})}{(14)\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{25/32(34)[15](46)[23](13)(s_{123}-s_{234})(s_{23}-s_{56})}{(14)\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{-15/8(34)^2(46)[25][14][23](12)(s_{23}-s_{56})}{(14)\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{-15/16(34)[15](3|1+4|2)(46)[14](12)(s_{14}-s_{56})}{(23)\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{-15/16(34)(3|1+4|2)(46)^2[14]^2(12)(s_{25}+s_{26}+s_{35}+s_{36})}{(23)(56)\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{-15/16(34)[15][14][23](24)(36)(13)(s_{14}-s_{56})}{(23)\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{15/16[24](4|2+3|1)(3|1+4|2)(46)(26)(s_{14}-s_{23})}{(56)\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{-15/32(3|1+4|2)(46)(s_{123}-s_{234})(36)[13](s_{14}-s_{23})}{(56)\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{(46)(23)(3|1+4|2)(s_{14}-s_{23})(15/16(46)[13][24]+15/16[13](36)[23]+15/16(26)[12][23])}{(56)\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{(4|2+3|1)(3|1+4|2)(295/32[12](16)(12)[15] \dots \langle 8 \text{ terms} \rangle \dots -985/64[45](24)(46)[24])}{\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{(46)(3|1+4|2)(s_{123}-s_{234})(-5/4(23)[12][35]+275/64(13)[13][15])}{\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{(36)[45](4|2+3|1)(s_{134}-s_{124})(235/32(14)[12]+295/32(34)[23])}{\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{-415/64(34)^3[35][24](36)[34][13] \dots \langle 42 \text{ terms} \rangle \dots -15/8[12](46)[25][13]23^2(13)}{\Delta_{14|23|56}^2(2|1+4|3)} + \\
& \frac{(46)(3|1+4|2)(-5/4(34)(46)[14](12)+5/4(34)[13](36)(12)-5/4(24)^2(36)[24])}{(14)(23)(56)\Delta_{14|23|56}(2|1+4|3)} + \\
& \frac{(46)(s_{23}-s_{56})(5/4(24)(36)[12](13)-5/4(34)(46)[14](13)+5/2(34)[13](36)(13)+5/4(34)^2(36)[34])}{(14)(23)(56)\Delta_{14|23|56}(2|1+4|3)} + \\
& \frac{(46)(3|1+4|2)(-15/8(46)(23)[23] \dots \langle 3 \text{ terms} \rangle \dots -25/4(24)(36)[23])}{(14)(56)\Delta_{14|23|56}(2|1+4|3)} + \\
& \frac{(46)(s_{23}-s_{56})(-5/2(34)(46)[24]+5/2(34)(36)[23]-5/8(46)[12](13))}{(14)(56)\Delta_{14|23|56}(2|1+4|3)} + \\
& \frac{25/8[45](34)^2[13](36) \dots \langle 4 \text{ terms} \rangle \dots -5/4(34)[15](46)[14](13)}{(23)\Delta_{14|23|56}(2|1+4|3)} + \\
& \frac{(36)(-5/8(34)[24](36)(24)[13]+5/8(24)(36)[12]^2(12)+15/8(34)[12](46)[14](12)-15/8(34)^2(46)[14][34])}{(23)(56)\Delta_{14|23|56}(2|1+4|3)} + \\
& \frac{5/8[35][45](34)^3[14]}{(23)[56]\Delta_{14|23|56}(2|1+4|3)} + \\
& \frac{15/8(34)(36)[15](s_{25}+s_{26}+s_{35}+s_{36})}{(23)\Delta_{14|23|56}(2|1+4|3)} + \\
& \frac{(36)(13)(46)(3|1+4|2)(5/4(34)[34]+5/4(24)[24])}{(14)(23)(56)\Delta_{14|23|56}(1|2+3|4)} + \\
& \frac{(36)^2(34)(5/8(24)[24]^2+5/8(34)[34][24]+5/8[13][24](13)-5/8[12][34](13))}{(23)(56)\Delta_{14|23|56}(1|2+3|4)} + \\
& \frac{-5/8(34)(36)^2[24](s_{25}+s_{26}+s_{35}+s_{36})}{(23)(56)\Delta_{14|23|56}(1|2+3|4)} + \\
& (123456 \rightarrow 432165) + \\
& \frac{10[25]^2(23)^2(1|2+3|1)}{(12)[56](2|1+3|2)^2(2|1+3|4)} + \\
& \frac{10(1|2+3|1)[45]^2(23)[12]}{[34][56](2|1+3|2)(2|1+3|4)^2} + \\
& \frac{[25][523]^2(23)^3[35][24] \dots \langle 6 \text{ terms} \rangle \dots +20/3[12][35][14][13](12)(13)^2}{(12)(13)[13][23][34][56](2|1+3|2)(2|1+3|4)} + \\
& \frac{-10[45](1|2+3|1)[12]^2[35]}{[13][23][45][56](2|1+3|2)(2|1+3|4)} + \\
& \frac{[12](46)(10[25](12)^3[12]^2(23) \dots \langle 23 \text{ terms} \rangle \dots -5[35][24][13](12)(13)(34)(23))}{(12)^2(13)[13]^2(23)[23](56)[56]s_{123}} + \\
& \frac{-5/3[12](46)(24)(1|2+3|5)(13)^2}{(12)^2(14)(23)[23](56)[56]s_{123}} + \\
& \frac{-5/9(34)(46)^2(13)^2}{(12)(14)^2(23)(56)s_{123}} + \\
& \frac{-15/2(26)(s_{13}-s_{24})[35](4|2+3|1)(s_{134}-s_{124})}{\Delta_{14|23|56}(2|1+4|3)^3} + \\
& \frac{30(26)(24)[12][35]}{(2|1+4|3)^3} + \\
& \frac{(26)(5/3[12](46)(14)[34](12)(13) \dots \langle 9 \text{ terms} \rangle \dots -5/3(14)[12]^2(12)^2(16))}{(12)(14)(56)(1|2+3|4)(2|1+4|3)^2} + \\
& \frac{[35]12(13)(-5(34)[35]-5(24)[25])}{(14)[56](1|2+3|4)(2|1+4|3)^2} + \\
& \frac{-5(46)(16)[14]13}{(56)(1|2+3|4)(2|1+4|3)^2} + \\
& \frac{(14)(24)[45](-5[25][14]+5[45][12])}{[56](1|2+3|4)(2|1+4|3)^2} + \\
& \frac{-25/4[35](4|2+3|1)(3|1+4|2)(s_{24}-s_{13})(26)(s_{124}-s_{134})}{\Delta_{14|23|56}^2(2|1+4|3)^2} + \\
& \frac{(26)(-5(24)(14)^2(36)[34] \dots \langle 12 \text{ terms} \rangle \dots -95/4(14)[23](24)(36)(12))}{(12)^2(14)(56)(2|1+4|3)^2} + \\
& \frac{[35](-20(24)^2[35](13)^2 \dots \langle 3 \text{ terms} \rangle \dots +35/4(34)[45](14)(24)(12))}{(12)^2(14)[56](2|1+4|3)^2} + \\
& \frac{(26)(20[13]^2(36)(12)^2[24] \dots \langle 4 \text{ terms} \rangle \dots +20[24][34](26)[23](24)(23))}{(12)^2[14][34](56)(2|1+4|3)^2} + \\
& \frac{(24)^2[45]^2(15(24)[24]-5(23)[23])}{(12)^2[14][56](2|1+4|3)^2} + \\
& \frac{25[45]^2(24)^2(14)}{(12)^2[56](2|1+4|3)^2} + \\
& \frac{(46)(-5(24)(36)[23](12)-15(46)(24)[34](13)+60(24)(14)(36)[34]-35(46)(14)[14](12))}{(12)(14)(56)(2|1+4|3)^2} + \\
& \frac{[35](20[13](23)^2[35][24]-15[12][45][14](24)(12)+20[12][35][14](23)(12))}{(12)[14][34][56](2|1+4|3)^2} + \\
& \frac{(16)(-5/2(34)(46)[34]^2 \dots \langle 4 \text{ terms} \rangle \dots -5/2(26)(23)[23]^2)}{(12)[34](56)(1|2+4|3)(2|1+4|3)} + \\
& \frac{-5[24][25](26)[13]^2(12)(13) \dots \langle 10 \text{ terms} \rangle \dots -5[12]^2[45](14)[34](26)(12)}{(12)[23][34](56)[56](2|1+4|3)(2|1+3|4)} + \\
& \frac{-75/4[12]^2[35](14)[34](26)(13)(12)(23)(13)^2 \dots \langle 70 \text{ terms} \rangle \dots -1285/36(46)[25][13][23]^2(23)^2(12)(13)}{(12)(23)[13]^2(23)[23](56)[56](1|2+3|4)(2|1+4|3)} + \\
& \frac{[12]^2[45](12)(5/2(26)[12]+5/2[13](36))}{[13][14](56)[56](1|2+3|4)(2|1+4|3)} + \\
& \frac{5/2(34)(46)^2(34)(13)^2}{(14)^2(23)(56)(1|2+3|4)(2|1+4|3)} + \\
& \frac{5/2[24]^212[15]^2}{[14]^2[23][56](1|2+3|4)(2|1+4|3)} + \\
& \frac{175/128(6|1+4|5)(4|2+3|1)(3|1+4|2)(s_{134}-s_{124})(s_{123}-s_{234})(s_{25}+s_{26}+s_{35}+s_{36})}{\Delta_{14|23|56}^3(2|1+4|3)} + \\
& \frac{(13)^2[35](46)(24)(3513+105/4(23)[23])}{(12)^2(14)(23)[23](56)[56](2|1+4|3)} + \\
& \frac{-45/2[45](46)[34](23)^2[23](13) \dots \langle 11 \text{ terms} \rangle \dots -45/2[12][35][34](26)23^2(13)}{(12)^2[14](23)[23][34](56)[56](2|1+4|3)} + \\
& \frac{-5(34)(46)[25](14)[14][13](12) \dots \langle 52 \text{ terms} \rangle \dots +10[25](36)[23]^2(24)^2(23)}{(12)[13](14)(23)[23](56)[56](2|1+4|3)} + \\
& \frac{95/4(34)[12][45](46)[34]^2(23)[13] \dots \langle 38 \text{ terms} \rangle \dots -15[12][35][24]^2(23)(26)(24)[13]}{(12)[13][14][23][23][34](56)[56](2|1+4|3)} + \\
& \frac{10[12](14)^2(16)[34](36)}{(12)(13)[13](56)(1|2+4|3)^2} + \\
& \frac{-10[12](46)(14)(16)[34]}{(12)[13](56)(1|2+4|3)^2} + \\
& \frac{10(34)(16)^2[23]}{(12)(56)(1|2+4|3)^2} + \\
& \frac{(13)(16)(-15/2(46)[34]-5/2(26)[23]+5/2[13](16))}{(12)^2[34](56)(1|2+4|3)} + \\
& \frac{[35](5(34)[35][24](14)+5/9[12][35](14)[14](13)+5(34)[12][45][23](12))}{(12)(13)[13]^2[34](56)[56](1|2+4|3)} + \\
& \frac{(16)(5(24)(46)[24]^2 \dots \langle 8 \text{ terms} \rangle \dots +20(14)[12](36)[34])}{(12)(13)[13][34](56)(1|2+4|3)} + \\
& \frac{5[24]^2[25](14)(26)(24) \dots \langle 9 \text{ terms} \rangle \dots +5(14)(16)[14][25]13}{(12)(13)[13][34](56)[56](1|2+4|3)} + \\
& \frac{[35](50/9[25]12-40/9[12][35](13)+10[25]13)}{(12)[13][34][56](1|2+4|3)} + \\
& \frac{5(34)[12][35](6|1+5|2)}{(13)[13]^2[56][56](1|2+4|3)} + \\
& \frac{-5[24]^2[13](12)(46)[25](23) \dots \langle 43 \text{ terms} \rangle \dots -5/2[24][45][13](24)(36)[23](13)}{(12)[23][13][23][34](56)[56](2|1+3|4)} + \\
& \frac{[12]^2(12)(10(36)[12][35][34] \dots \langle 3 \text{ terms} \rangle \dots +10[14][12][35](16))}{(13)[13]^2[23][34](56)[56](2|1+3|4)} + \\
& \frac{5/3[12]^2[35](14)^2[14](36)(12)^2 \dots \langle 60 \text{ terms} \rangle \dots +5/3[12]^2[35](46)23(12)^2(13)}{(12)^2[13]^2(14)(23)[23](56)[56](1|2+3|4)} + \\
& \frac{[12]^2(5/3[12][45](26)[23](12)+5/3[45](36)[23][13](12)+5/3[12][35][34](26)(13)+5/3[35](36)[34]13)}{(12)[13]^2[14][23](56)[56](1|2+3|4)} + \\
& \frac{25/18(46)^2(13)^3}{(12)(14)^2(23)(56)(1|2+3|4)} + \\
& \frac{5/6[24]^3[15]^2}{[14]^2[23][34][56](1|2+3|4)} + \\
& \frac{-45/4[14][13](12)(46)[25](14)(34) \dots \langle 24 \text{ terms} \rangle \dots +25/4(24)^2(36)[25][23]^2(23)}{(12)^2[13]^2(14)(23)[23](56)[56]} + \\
& \frac{25/4[45][13](46)[34]^2(34)[12](23) \dots \langle 47 \text{ terms} \rangle \dots -10[24][45][13]^2(12)(24)(36)[12]}{(12)^2[13]^2[14](23)[23][34](56)[56]} + \\
& \frac{-10(34)[24][25](36)[13]^2(12)^2 \dots \langle 11 \text{ terms} \rangle \dots -5[24][25](36)(23)[23](24)[13](12)}{(12)^2(13)[13]^2(23)[23][34](56)[56]} + \\
& \frac{5[12]^2(46)[25](23)(12) \dots \langle 14 \text{ terms} \rangle \dots +5(34)[12][35](23)[23](36)}{(12)(13)[13]^2(23)[23](56)[56]}
\end{aligned}$$