

$$\frac{[35]\langle 13 \rangle^2 [13]\langle 3|1+4|2](s_{12}+s_{13}+s_{24}+s_{34})\langle 46 \rangle(-1/16[13][13]-1/16\langle 34 \rangle[34])}{(14)\Delta_{14|23|56}^2(1|2+3|4)\langle 2|1+4|3]} +$$

$$\frac{3/16\langle 36 \rangle[14](s_{12}+s_{13}+s_{24}+s_{34})\langle 3|1+4|2 \rangle[24]\langle 4|1+6|5 \rangle}{(23)\Delta_{14|23|56}^2\langle 2|1+4|3 \rangle} +$$

$$\frac{-1/8\langle 13 \rangle^3[12]\langle 26 \rangle[13][15] \dots \langle 10 \text{ terms} \rangle \dots -1/8\langle 13 \rangle\langle 36 \rangle[24][12]\langle 24 \rangle^2[45]}{(23)\Delta_{14|23|56}(1|2+3|4)\langle 2|1+4|3 \rangle} +$$

$$\frac{(s_{14}-s_{56})(5/8\langle 34 \rangle^2\langle 36 \rangle[45][34] \dots \langle 5 \text{ terms} \rangle \dots +11/8\langle 13 \rangle\langle 36 \rangle\langle 12 \rangle[12][15])}{(23)\Delta_{14|23|56}(1|2+3|4)\langle 2|1+4|3 \rangle} +$$

$$\frac{(s_{12}+s_{13}+s_{24}+s_{34})\langle 13 \rangle^2\langle 46 \rangle(-1/16[25]\langle 34 \rangle[13][24]-1/16[23][12]\langle 34 \rangle[45]-1/16[12]^2\langle 13 \rangle[35])}{(14)\Delta_{14|23|56}^2\langle 1|2+3|4 \rangle} +$$

$$(123456 \rightarrow -432165) +$$

$$\frac{1[14]\langle 34 \rangle^2\langle 46 \rangle^2[24]}{\langle 24 \rangle\langle 56 \rangle\langle 4|2+3|4 \rangle^2 s_{123}} +$$

$$\frac{2[24]\langle 12 \rangle\langle 34 \rangle^3\langle 46 \rangle^2[13]}{(14)\langle 23 \rangle[23]\langle 24 \rangle^2\langle 56 \rangle s_{123}\langle 4|2+3|4 \rangle} +$$

$$\frac{\langle 34 \rangle^2\langle 46 \rangle^2(-1\langle 13 \rangle[13][24]+2[12]\langle 13 \rangle[34]+3[12]\langle 12 \rangle[24])}{(14)\langle 23 \rangle[23]\langle 24 \rangle\langle 56 \rangle s_{123}\langle 4|2+3|4 \rangle} +$$

$$\frac{2\langle 3|1+2|3 \rangle\langle 13 \rangle\langle 34 \rangle\langle 46 \rangle^2}{\langle 12 \rangle\langle 14 \rangle\langle 23 \rangle[23]\langle 24 \rangle\langle 56 \rangle s_{123}} +$$

$$\frac{1[12]\langle 13 \rangle^2\langle 46 \rangle^2}{\langle 12 \rangle\langle 14 \rangle\langle 23 \rangle[23]\langle 56 \rangle s_{123}} +$$

$$\frac{3/2\langle 26 \rangle\langle 3|1+4|2 \rangle[13]\langle 24 \rangle(s_{124}-s_{134})[35]}{\Delta_{14|23|56}\langle 2|1+4|3 \rangle^3} +$$

$$\frac{-3/2(s_{124}-s_{134})\langle 4|2+3|1 \rangle[14]\langle 26 \rangle\langle 14 \rangle[35]}{\Delta_{14|23|56}\langle 2|1+4|3 \rangle^3} +$$

$$\frac{6[14]\langle 26 \rangle\langle 34 \rangle\langle 24 \rangle[35]}{(23)\langle 2|1+4|3 \rangle^3} +$$

$$\frac{\langle 24 \rangle\langle 36 \rangle^2\langle 2|12 \rangle\langle 12 \rangle^2[13]-2[34]\langle 24 \rangle^2[24]-2[14]\langle 14 \rangle[34]\langle 24 \rangle)}{(12)\langle 23 \rangle\langle 56 \rangle\langle 2|1+4|3 \rangle^2\langle 3|5+6|3 \rangle} +$$

$$\frac{5/4\langle 4|2+3|1 \rangle s_{124}\langle 26 \rangle\langle 3|1+4|2 \rangle(s_{124}-s_{134})[35]}{\Delta_{14|23|56}^2\langle 2|1+4|3 \rangle^2} +$$

$$\frac{\langle 3|1+4|2 \rangle(-1/2[15]\langle 14 \rangle\langle 26 \rangle[13] \dots \langle 3 \text{ terms} \rangle \dots -9/2[12]\langle 26 \rangle[35]\langle 24 \rangle)}{\Delta_{14|23|56}\langle 2|1+4|3 \rangle^2} +$$

$$\frac{1/2(s_{13}-s_{24})s_{124}\langle 26 \rangle\langle 3|1+4|2 \rangle[35]}{\Delta_{14|23|56}\langle 1|2+3|4 \rangle\langle 2|1+4|3 \rangle^2} +$$

$$\frac{[14](-2\langle 36 \rangle[13]\langle 24 \rangle[25]\langle 14 \rangle \dots \langle 6 \text{ terms} \rangle \dots +1\langle 13 \rangle\langle 46 \rangle[13][15]\langle 14 \rangle)}{\Delta_{14|23|56}\langle 2|1+4|3 \rangle^2} +$$

$$\frac{(s_{124}-s_{134})\langle 3|4|15 \rangle\langle 13 \rangle\langle 46 \rangle[13] \dots \langle 7 \text{ terms} \rangle \dots -1/4[12]\langle 46 \rangle[45]\langle 24 \rangle)}{\Delta_{14|23|56}\langle 2|1+4|3 \rangle^2} +$$

$$\frac{(s_{124}-s_{134})(s_{13}-s_{24})(1/4[14]\langle 14 \rangle[15]\langle 16 \rangle \dots \langle 6 \text{ terms} \rangle \dots +1/4\langle 23 \rangle[25]\langle 26 \rangle[23])}{\Delta_{14|23|56}\langle 1|2+3|4 \rangle\langle 2|1+4|3 \rangle^2} +$$

$$\frac{-2\langle 23 \rangle\langle 36 \rangle[35]\langle 24 \rangle \dots \langle 4 \text{ terms} \rangle \dots +1\langle 23 \rangle[25]\langle 26 \rangle\langle 24 \rangle}{(12)\langle 23 \rangle\langle 2|1+4|3 \rangle^2} +$$

$$\frac{\langle 36 \rangle\langle 2|14 \rangle\langle 14 \rangle\langle 26 \rangle\langle 24 \rangle+2\langle 26 \rangle\langle 24 \rangle^2[24]-3[14]\langle 12 \rangle\langle 24 \rangle\langle 46 \rangle-1\langle 23 \rangle\langle 12 \rangle[13]\langle 46 \rangle)}{(12)\langle 23 \rangle\langle 56 \rangle\langle 2|1+4|3 \rangle^2} +$$

$$\frac{-1\langle 36 \rangle^2 s_{124}\langle 34 \rangle\langle 24 \rangle[34]}{(12)\langle 23 \rangle\langle 56 \rangle\langle 2|1+4|3 \rangle\langle 3|5+6|3 \rangle^2} +$$

$$\frac{\langle 26 \rangle\langle 36 \rangle(-2\langle 14 \rangle[13]\langle 24 \rangle[24]-1[23]\langle 24 \rangle^2[24]-1[14]\langle 14 \rangle^2[13])}{(12)\langle 24 \rangle[34]\langle 56 \rangle\langle 2|1+4|3 \rangle\langle 3|5+6|3 \rangle} +$$

$$\frac{\langle 36 \rangle(-3[14]\langle 34 \rangle\langle 12 \rangle\langle 46 \rangle \dots \langle 6 \text{ terms} \rangle \dots +1[12]\langle 13 \rangle\langle 26 \rangle\langle 24 \rangle)}{(12)\langle 23 \rangle\langle 56 \rangle\langle 2|1+4|3 \rangle\langle 3|5+6|3 \rangle} +$$

$$\frac{35/64\langle 4|2+3|1 \rangle\langle 6|1+4|5 \rangle s_{56}\langle 3|1+4|2 \rangle(s_{12}+s_{13}+s_{24}+s_{34})(s_{124}-s_{134})}{\Delta_{14|23|56}^3\langle 2|1+4|3 \rangle} +$$

$$\frac{\langle 3|1+4|2 \rangle(91/8\langle 36 \rangle[24]^2\langle 12 \rangle\langle 34 \rangle[13]\langle 24 \rangle[35] \dots \langle 180 \text{ terms} \rangle \dots -29/16[23][24]\langle 23 \rangle\langle 34 \rangle\langle 46 \rangle\langle 24 \rangle[45][34])}{(1|2+3|4)\langle 2|1+4|3 \rangle\Delta_{14|23|56}^2} +$$

$$\frac{(s_{124}-s_{134})(-5/8\langle 36 \rangle[14][12]\langle 34 \rangle\langle 14 \rangle^2[45][34] \dots \langle 30 \text{ terms} \rangle \dots +5/16[23]\langle 13 \rangle^2\langle 36 \rangle[12][13]\langle 24 \rangle[45])}{(1|2+3|4)\langle 2|1+4|3 \rangle\Delta_{14|23|56}^2} +$$

$$\frac{-1/4(s_{13}-s_{24})\langle 13 \rangle\langle 3|1+4|2 \rangle\langle 6|1+2|4 \rangle[35]}{\Delta_{14|23|56}\langle 1|2+3|4 \rangle^2\langle 2|1+4|3 \rangle} +$$

$$\frac{(s_{123}-s_{234})\langle 3|1+4|2 \rangle(1/4[12]\langle 16 \rangle[45]+1/4[25]\langle 26 \rangle\langle 12 \rangle[24]+1/4\langle 26 \rangle\langle 13 \rangle[35][24])}{\Delta_{14|23|56}\langle 1|2+3|4 \rangle^2\langle 2|1+4|3 \rangle} +$$

$$\frac{[45](s_{123}-s_{234})\langle 3|1+4|2 \rangle(-1/4\langle 26 \rangle\langle 24 \rangle[24]^2+1/4[12]\langle 12 \rangle[34]\langle 36 \rangle)}{[14]\Delta_{14|23|56}\langle 1|2+3|4 \rangle^2\langle 2|1+4|3 \rangle} +$$

$$\frac{1/4\langle 13 \rangle\langle 12 \rangle[12]\langle 46 \rangle\langle 3|1+4|2 \rangle[35]}{\langle 14 \rangle\Delta_{14|23|56}\langle 1|2+3|4 \rangle\langle 2|1+4|3 \rangle} +$$

$$\frac{1/4\langle 13 \rangle^2(s_{23}-s_{56})[12]\langle 46 \rangle[35]}{\langle 14 \rangle\Delta_{14|23|56}\langle 1|2+3|4 \rangle\langle 2|1+4|3 \rangle} +$$

$$\frac{[45]\langle 3|1+4|2 \rangle(-1/2\langle 23 \rangle\langle 46 \rangle[13][24]-1/2[12]\langle 26 \rangle\langle 24 \rangle[24]+1/4\langle 26 \rangle[12]\langle 13 \rangle[13])}{[14]\Delta_{14|23|56}\langle 1|2+3|4 \rangle\langle 2|1+4|3 \rangle} +$$

$$\frac{[12](s_{23}-s_{56})(1/4\langle 23 \rangle\langle 36 \rangle[35][24] \dots \langle 3 \text{ terms} \rangle \dots +1/4[12]\langle 13 \rangle[45]\langle 26 \rangle)}{[14]\Delta_{14|23|56}\langle 1|2+3|4 \rangle\langle 2|1+4|3 \rangle} +$$

$$\frac{33/8[14]^2\langle 14 \rangle^2[25]\langle 36 \rangle \dots \langle 52 \text{ terms} \rangle \dots +15/8\langle 13 \rangle[24][12]\langle 26 \rangle\langle 24 \rangle[25]}{\Delta_{14|23|56}\langle 1|2+3|4 \rangle\langle 2|1+4|3 \rangle} +$$

$$\frac{1\langle 13 \rangle\langle 16 \rangle[12]\langle 2|1+3|4 \rangle[45]}{(12)\langle 14 \rangle\langle 1|2+3|4 \rangle^2\langle 2|1+4|3 \rangle} +$$

$$\frac{-1[23]\langle 36 \rangle[24]\langle 23 \rangle^2[35] \dots \langle 17 \text{ terms} \rangle \dots +5/2\langle 36 \rangle\langle 12 \rangle[12]\langle 34 \rangle[45][34]}{(12)\langle 14 \rangle\langle 23 \rangle[23]\langle 1|2+3|4 \rangle\langle 2|1+4|3 \rangle} +$$

$$\frac{-2[14][25]\langle 46 \rangle\langle 23 \rangle \dots \langle 4 \text{ terms} \rangle \dots -5/2\langle 34 \rangle\langle 36 \rangle[45][13]}{(12)\langle 14 \rangle\langle 23 \rangle[23]\langle 2|1+4|3 \rangle} +$$

$$\frac{[35][24](-2\langle 36 \rangle[13]+1[14]\langle 46 \rangle)}{(12)\langle 14 \rangle[23][34]\langle 2|1+4|3 \rangle} +$$

$$\frac{1/2\langle 36 \rangle^2\langle 24 \rangle}{(12)\langle 23 \rangle\langle 56 \rangle\langle 2|1+4|3 \rangle} +$$

$$\frac{-3\langle 34 \rangle^2\langle 36 \rangle[35]\langle 3|1+2|4 \rangle}{(12)\langle 23 \rangle\langle 3|5+6|3 \rangle^3} +$$

$$\frac{-5/2\langle 34 \rangle\langle 36 \rangle^2 s_{124}}{(12)\langle 23 \rangle\langle 56 \rangle\langle 3|5+6|3 \rangle^2} +$$

$$\frac{-1\langle 34 \rangle^2\langle 36 \rangle[45]}{(12)\langle 23 \rangle\langle 3|5+6|3 \rangle^2} +$$

$$\frac{\langle 46 \rangle\langle 36 \rangle(-1[14]\langle 14 \rangle-1\langle 24 \rangle[24])}{(12)\langle 24 \rangle[34]\langle 56 \rangle\langle 3|5+6|3 \rangle} +$$

$$\frac{9/2\langle 34 \rangle\langle 36 \rangle^2}{(12)\langle 23 \rangle\langle 56 \rangle\langle 3|5+6|3 \rangle} +$$

$$\frac{1/4[23]\langle 13 \rangle\langle 36 \rangle[24]\langle 34 \rangle^2[13][45] \dots \langle 7 \text{ terms} \rangle \dots +1/8[23][24]^2\langle 23 \rangle\langle 34 \rangle^2\langle 46 \rangle[45]}{(1|2+3|4)\Delta_{14|23|56}^2} +$$

$$\frac{\langle 13 \rangle\langle 3|1+4|2 \rangle(1/4[25]\langle 56 \rangle[45]-1/4\langle 36 \rangle[35][24])}{\Delta_{14|23|56}\langle 1|2+3|4 \rangle^2} +$$

$$\frac{1/4\langle 36 \rangle[24](s_{123}-s_{234})\langle 3|1+4|2 \rangle[45]}{[14]\Delta_{14|23|56}\langle 1|2+3|4 \rangle^2} +$$

$$\frac{1/4[12]\langle 36 \rangle[45]\langle 3|1+4|2 \rangle}{[14]\Delta_{14|23|56}\langle 1|2+3|4 \rangle} +$$

$$\frac{-1\langle 13 \rangle[24]\langle 16 \rangle\langle 34 \rangle[45]}{(12)\langle 14 \rangle[14]\langle 1|2+3|4 \rangle^2} +$$

$$\frac{[24]^2\langle 46 \rangle^2(1/2\langle 13 \rangle\langle 34 \rangle[13]+1\langle 23 \rangle\langle 34 \rangle[23]+1/2[12]\langle 13 \rangle\langle 24 \rangle)}{(14)[14][23]\langle 24 \rangle\langle 56 \rangle\langle 1|2+3|4 \rangle\langle 4|2+3|4 \rangle} +$$

$$\frac{-2\langle 34 \rangle^2\langle 46 \rangle[45][24]}{(14)[14]\langle 24 \rangle\langle 1|2+3|4 \rangle\langle 4|5+6|4 \rangle} +$$

$$\frac{-5/2\langle 13 \rangle\langle 36 \rangle[24]\langle 24 \rangle^2[25] \dots \langle 13 \text{ terms} \rangle \dots +1/2[23]\langle 13 \rangle\langle 23 \rangle\langle 34 \rangle\langle 46 \rangle[45]}{(12)\langle 14 \rangle[14]\langle 23 \rangle[23]\langle 24 \rangle\langle 1|2+3|4 \rangle} +$$

$$\frac{\langle 46 \rangle(-5/2[24]^2\langle 12 \rangle\langle 23 \rangle\langle 34 \rangle\langle 46 \rangle \dots \langle 9 \text{ terms} \rangle \dots -2\langle 36 \rangle[24]\langle 12 \rangle^2[12]\langle 34 \rangle)}{(12)\langle 14 \rangle[14]\langle 23 \rangle[23]\langle 24 \rangle\langle 56 \rangle\langle 1|2+3|4 \rangle} +$$

$$\frac{[24]\langle 1|24 \rangle\langle 26 \rangle\langle 24 \rangle[25]\langle 14 \rangle \dots \langle 3 \text{ terms} \rangle \dots -1\langle 13 \rangle[24]\langle 46 \rangle\langle 24 \rangle[35]}{(12)\langle 14 \rangle[14][23]\langle 24 \rangle[34]\langle 1|2+3|4 \rangle} +$$

$$\frac{-1\langle 13 \rangle^2\langle 34 \rangle[45]\langle 46 \rangle}{(12)\langle 14 \rangle\langle 23 \rangle\langle 1|2+3|4 \rangle\langle 4|5+6|4 \rangle} +$$

$$\frac{3/2\langle 34 \rangle\langle 46 \rangle^2[24]^2}{(14)[34]\langle 56 \rangle\langle 4|2+3|4 \rangle^2} +$$

$$\frac{-3\langle 34 \rangle^2\langle 46 \rangle^2[13][24]}{(14)[14][23]\langle 24 \rangle^2\langle 56 \rangle\langle 4|2+3|4 \rangle} +$$

$$\frac{[24]\langle 34 \rangle^2\langle 46 \rangle\langle 3 \rangle\langle 36 \rangle[13]+3[12]\langle 26 \rangle)}{(14)[14]\langle 23 \rangle[23]\langle 24 \rangle\langle 56 \rangle\langle 4|2+3|4 \rangle} +$$

$$\frac{7/2\langle 34 \rangle^2\langle 46 \rangle^2[24]}{(14)\langle 23 \rangle[23]\langle 24 \rangle\langle 56 \rangle\langle 4|2+3|4 \rangle} +$$

$$\frac{-3\langle 34 \rangle\langle 46 \rangle^2[13][24]}{(14)[14][23]\langle 24 \rangle^2[34]\langle 56 \rangle} +$$

$$\frac{\langle 34 \rangle(1/2\langle 23 \rangle[25]\langle 46 \rangle \dots \langle 3 \text{ terms} \rangle \dots +5/2\langle 34 \rangle\langle 46 \rangle[45])}{(12)\langle 14 \rangle[14]\langle 23 \rangle[23]\langle 24 \rangle} +$$

$$\frac{\langle 46 \rangle(6[12]\langle 13 \rangle\langle 36 \rangle\langle 24 \rangle \dots \langle 3 \text{ terms} \rangle \dots -5/2\langle 34 \rangle\langle 36 \rangle\langle 24 \rangle[24])}{(12)\langle 14 \rangle[14]\langle 23 \rangle[23]\langle 24 \rangle\langle 56 \rangle} +$$

$$\frac{\langle 46 \rangle(-3\langle 34 \rangle[35][24]+1[45][12]\langle 14 \rangle-1[14]\langle 14 \rangle[25])}{(12)\langle 14 \rangle[14][23]\langle 24 \rangle[34]} +$$

$$\frac{[24]\langle 46 \rangle\langle 4|23 \rangle\langle 36 \rangle\langle 24 \rangle-4\langle 23 \rangle\langle 46 \rangle[23]-5/2\langle 13 \rangle\langle 46 \rangle[13]-5/2[14]\langle 14 \rangle\langle 46 \rangle)}{(12)\langle 14 \rangle[14][23]\langle 24 \rangle[34]\langle 56 \rangle} +$$