

$$\begin{aligned}
& \frac{-1/2[12]\langle 13 \rangle^2[14]\langle 46 \rangle^2}{\langle 12 \rangle \langle 56 \rangle [1|2+3|1]^2 \langle 4|5+6|4]} + \\
& \frac{383/18[12]\langle 13 \rangle [15]\langle 36 \rangle}{\langle 12 \rangle [14] \langle 1|2+3|1]^2} + \\
& \frac{-383/18[12]^2 \langle 3|1+6|5 \rangle [15]}{[13][14][56] \langle 1|2+3|1]^2} + \\
& \frac{3/2 \langle 34 \rangle \langle 13 \rangle^2 [14]\langle 46 \rangle^2}{\langle 12 \rangle \langle 14 \rangle \langle 23 \rangle \langle 56 \rangle \langle 1|2+3|1 \rangle \langle 4|5+6|4]} + \\
& \frac{73/2[15]^2 [12]\langle 13 \rangle^2 [14][14]}{\langle 12 \rangle [14] \langle 23 \rangle [23][56] \langle 1|2+3|1 \rangle \langle 1|5+6|1]} + \\
& \frac{1/6[12]^2 \langle 13 \rangle \langle 16 \rangle [15]}{\langle 12 \rangle [14] \langle 23 \rangle \langle 1|2+3|1 \rangle \langle 1|5+6|1]} + \\
& \frac{-196/9[12]\langle 13 \rangle^2 [15]^2}{\langle 12 \rangle [14][56] \langle 1|2+3|1 \rangle \langle 1|5+6|1]} + \\
& \frac{5/3 \langle 1|2+3|5 \rangle [15][12]\langle 13 \rangle \langle 34 \rangle}{\langle 12 \rangle \langle 23 \rangle [23][56] \langle 1|2+3|1 \rangle \langle 1|5+6|1]} + \\
& \frac{-5/2[12]^2 \langle 13 \rangle \langle 16 \rangle \langle 46 \rangle}{\langle 12 \rangle \langle 23 \rangle \langle 56 \rangle \langle 1|2+3|1 \rangle \langle 1|5+6|1]} + \\
& \frac{347/36[12]^2 \langle 1|2+3|5 \rangle [15]}{\langle 12 \rangle [13][14] \langle 23 \rangle [56] \langle 1|2+3|1]} + \\
& \frac{13/3[12]^2 [25][15]\langle 12 \rangle}{\langle 12 \rangle [13][14] \langle 23 \rangle [56] \langle 1|2+3|1]} + \\
& \frac{-383/18[12]\langle 3|1+6|5 \rangle [15]}{\langle 12 \rangle [13][14][56] \langle 1|2+3|1]} + \\
& \frac{5/6 \langle 34 \rangle \langle 13 \rangle \langle 3|1+2|3 \rangle [15]^2}{\langle 12 \rangle [13] \langle 23 \rangle [56] \langle 2|3|5+6|1|2 \rangle - \langle 3|4|5+6|1|3 \rangle} + \\
& \frac{[16] \langle 97/3 \langle 34 \rangle^2 [45][24][13]^2 \dots \langle 22 \text{ terms} \rangle \dots - 1607/36 [23][12][13][25] \langle 23 \rangle^2)}{\langle 12 \rangle [13] \langle 14 \rangle [14] \langle 23 \rangle [23] \langle 34 \rangle \langle 1|5+6|1]} + \\
& \frac{[12] \langle 16 \rangle (-167/6 \langle 36 \rangle [23][24] \langle 24 \rangle [13] \langle 23 \rangle \dots \langle 10 \text{ terms} \rangle \dots + 193/6 \langle 34 \rangle \langle 13 \rangle [13] \langle 34 \rangle \langle 46 \rangle [14])}{\langle 12 \rangle [13] \langle 14 \rangle [14] \langle 23 \rangle [23] \langle 34 \rangle \langle 56 \rangle \langle 1|5+6|1]} + \\
& \frac{[15] \langle 97/3 [25][14]^3 \langle 14 \rangle^3 \dots \langle 11 \text{ terms} \rangle \dots - 97/3 [23][35][12] \langle 13 \rangle^2 [13] \langle 23 \rangle)}{\langle 12 \rangle [13] \langle 14 \rangle [14] \langle 23 \rangle [23] \langle 34 \rangle [56] \langle 1|5+6|1]} + \\
& \frac{\langle 36 \rangle [24] \langle 14 \rangle [15] (-97/3 [14] \langle 14 \rangle + 97/3 \langle 34 \rangle [34] + 97/3 [24] \langle 24 \rangle)}{\langle 12 \rangle \langle 14 \rangle [14] \langle 23 \rangle [23] \langle 34 \rangle \langle 1|5+6|1]} + \\
& \frac{193/6 \langle 34 \rangle^2 \langle 16 \rangle [24][15]}{\langle 12 \rangle \langle 23 \rangle [23] \langle 56 \rangle [56] \langle 1|5+6|1]} + \\
& \frac{2131/18 \langle 24 \rangle [35][12]^2 \langle 13 \rangle [34] \langle 46 \rangle \langle 23 \rangle \dots \langle 75 \text{ terms} \rangle \dots - 1123/18 [23][24] \langle 24 \rangle [35][12] \langle 46 \rangle \langle 23 \rangle^2}{\langle 12 \rangle [13] \langle 14 \rangle [14] \langle 23 \rangle [23] \langle 24 \rangle \langle 34 \rangle [56] [56]} +
\end{aligned}$$

$$(123456 \rightarrow \overline{432165})$$