```
m_{\star}^2(5/3\langle12\rangle\langle\mathbf{3}|\mathbf{4}|2]\langle1\mathbf{4}\rangle\dots\langle\langle\mathbf{4}\,\mathrm{terms}\rangle\dots-5/6\mathrm{tr}(\mathbf{3}|\mathbf{4})\langle1\mathbf{4}\rangle\langle\mathbf{3}\mathbf{1}\rangle)
                                                                                                                                                                                                                                                                                                                                                                                             ⟨1|3|5|1⟩⟨1|5|2
                                                                                                                                                                                                                                                                                                                          \frac{[2\mathbf{4}]\langle 12\rangle m_{t}^{2}(5/6[\mathbf{3}|\mathbf{4}|1\rangle-5/6[\mathbf{3}2]\langle 12\rangle)}{\langle 1|\mathbf{3}|\mathbf{5}|1\rangle\langle 1|\mathbf{5}|2|}+
                                                                                                                                                                                     \frac{\langle {\bf 31} \rangle m_{\bf t} (-5/6[1{\bf 4}]\langle 1|{\bf 3}|{\bf 4}|1\rangle \ldots \langle \! (4\,{\rm terms})\!\rangle \ldots -5/6\langle 1|{\bf 3}|{\bf 4}]{\rm tr}({\bf 3}|{\bf 4}) -5/6\langle 1|{\bf 3}|{\bf 4}]\langle 2|{\bf 4}|2])}{\langle 1|{\bf 3}|{\bf 5}|1\rangle\langle 1|{\bf 5}|2|} + \frac{\langle {\bf 31} \rangle m_{\bf t} (-5/6[1{\bf 4}]\langle 1|{\bf 3}|{\bf 4}|1\rangle \ldots \langle \! (4\,{\rm terms})\!\rangle \ldots -5/6\langle 1|{\bf 3}|{\bf 4}]{\rm tr}({\bf 3}|{\bf 4}) -5/6\langle 1|{\bf 3}|{\bf 4}]\langle 2|{\bf 4}|2])}{\langle 1|{\bf 3}|{\bf 5}|1\rangle\langle 1|{\bf 5}|2|} + \frac{\langle {\bf 31} \rangle m_{\bf t} (-5/6[1{\bf 4}]\langle 1|{\bf 3}|{\bf 4}|1\rangle \ldots \langle \! (4\,{\rm terms})\!\rangle \ldots -5/6\langle 1|{\bf 3}|{\bf 4}|{\bf 4}|{\bf 5}|1\rangle \langle 1|{\bf 3}|{\bf 4}|1\rangle \langle 1|{\bf 5}|1\rangle \langle 1|1\rangle \langle 1
                                                                                                                                                                                                                                                                                                                                                                                                    5/3\langle \mathbf{34} \rangle \underline{m_t^2}_+
                                                                                                                                                                                                                                                                                                                                                                                                                   (1|5|2)
                                                                                                                                                                                                                                                                                                                                             \frac{m_t(5/6\langle \mathbf{32}\rangle[2\mathbf{4}]-5/6[1\mathbf{4}]\langle \mathbf{31}\rangle)}{\langle 1|\mathbf{5}|2|}+
m_{\mathcal{I}}(3]@(|1|2|3+4|4|3+4|-|1|3+4|1|4|3+4|+|1|3+4|3+4|4|1+2|-|3+4|2|3+4|4|1+2|)@(4|)(5/24\langle1|3|1|-5/24\langle2|3|2|+5/24\mathrm{tr}(3|4)+5/12m_{\mathcal{I}}^2)
                                                                                                                                                                                                                                                                                                                                                                                   \langle 1|{\bf 5}|2]\Delta_{12|{\bf 3}|{\bf 4}|{\bf 5}}
                                                                                                                                                                                                                          m_t^2(5/12\langle \mathbf{24}\rangle\langle \mathbf{3|4|1}]\langle \mathbf{2|3|2}]\ldots\langle\!\langle 13\,\mathrm{terms}\rangle\!\rangle\ldots + 5/6\langle \mathbf{24}\rangle\langle \mathbf{3|4|1}]\mathrm{tr}(\mathbf{3|4}))
                                                                                                                                                                                                                                                                                                                                                                                                        \Delta_{12|3|4|5}
                                                                                                                                          \langle {\bf 32} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4})^2 [{\bf 14}] + 5/8 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} | {\bf 1}] [{\bf 14}] - 5/24 {\rm tr} ({\bf 3|4}) \langle {\bf 2|3} | {\bf 2}] [{\bf 14}] - 5/12 \langle {\bf 2|3} | {\bf 4}] [{\bf 1|3} | {\bf 4|2}] \rangle_\perp \\ + 2 \langle {\bf 3|4} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4})^2 [{\bf 14}] + 5/8 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} | {\bf 1}] [{\bf 14}] - 5/24 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} | {\bf 1}] ({\bf 13|4}) \rangle_\perp \\ + 2 \langle {\bf 3|4} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4})^2 [{\bf 14}] + 5/8 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} | {\bf 1}] [{\bf 14}] - 5/24 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} | {\bf 1}] ({\bf 13|4}) \rangle_\perp \\ + 2 \langle {\bf 3|4} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4})^2 [{\bf 14}] + 5/8 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} | {\bf 1}] [{\bf 14}] - 5/24 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} | {\bf 1}] ({\bf 13|4}) \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4})^2 [{\bf 14}] + 5/8 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} | {\bf 1}] [{\bf 14}] - 5/24 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} | {\bf 1}] ({\bf 13|4}) \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4})^2 ({\bf 13|4}) + 5/8 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} | {\bf 1}] ({\bf 14|4}) \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4})^2 ({\bf 13|4}) + 5/8 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} | {\bf 1}] ({\bf 14|4}) \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4})^2 ({\bf 13|4}) + 5/8 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} | {\bf 13|4} \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4})^2 ({\bf 13|4}) + 5/8 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4})^2 ({\bf 3|4}) + 5/8 {\rm tr} ({\bf 3|4}) \langle {\bf 1|3} \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4})^2 ({\bf 3|4}) + 5/8 {\rm tr} ({\bf 3|4}) \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4})^2 ({\bf 3|4}) + 5/8 {\rm tr} ({\bf 3|4}) \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4}) + 5/8 {\rm tr} ({\bf 3|4}) \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4}) + 5/8 {\rm tr} ({\bf 3|4}) \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4}) + 5/8 {\rm tr} ({\bf 3|4}) \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4}) + 5/8 {\rm tr} ({\bf 3|4}) \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4}) + 5/8 {\rm tr} ({\bf 3|4}) \rangle_\perp \\ + 2 \langle {\bf 1|3} \rangle m_{\it f} (5/24 {\rm tr} ({\bf 3|4}) + 5/8 {\rm tr}
                                                                                                                                                                                                                                                                                                                                                                                                      \Delta_{12|3|4|5}
                                                                                                                                                                                                                                                                                                                                                                               (12345 \rightarrow -\overline{21345}) +
                                                                                                                                                                                                                                                      m_{t}^{2}(3\langle12\rangle\langle\mathbf{3}|\mathbf{4}|2]\langle1\mathbf{4}\rangle\dots\langle\!\langle\mathbf{3}\,\mathrm{terms}\rangle\!\rangle\dots-3/2\mathrm{tr}(\mathbf{3}|\mathbf{4})\langle1\mathbf{4}\rangle\langle\mathbf{3}\mathbf{1}\rangle)
                                                                                                                                                                                                                                                                                                                                                                                            \frac{\langle 1|3|5|1\rangle\langle 1|5|2]}{\langle 1|3|5|1\rangle\langle 1|5|2]}
                                                                                                                                                                                                                                                                                                                          \frac{[\mathbf{24}]\langle\mathbf{12}\rangle m_{t}^{2}(3/2[\mathbf{3}|\mathbf{4}|\mathbf{1}\rangle - 3/2[\mathbf{32}]\langle\mathbf{12}\rangle)}{\langle\mathbf{1}|\mathbf{3}|\mathbf{5}|\mathbf{1}\rangle\langle\mathbf{1}|\mathbf{5}|\mathbf{2}|} +
                                                                                                                                                                                     (31)m_t(-3/2[14]\langle 1|3|4|1\rangle \dots \langle 4 \text{ terms} \rangle \dots -3/2\langle 1|3|4]\text{tr}(3|4) -3/2\langle 1|3|4]\langle 2|4|2])
                                                                                                                                                                                                                                                                                                                                 \frac{\langle {\bf 32} \rangle m_{t} (-8/3 \langle 2|{\bf 3|4}] + 8/3 \langle 12 \rangle [14])}{\langle 12 \rangle (s_{1}{\bf 24} - m_{t}^{2})} + \\
                                                                                                                                                                                                                                                                                                                                                                                 \frac{8/3\langle 2\mathbf{4}\rangle[\mathbf{3}|\mathbf{4}|2\rangle\boldsymbol{m}_{t}}{\langle 12\rangle(s_{12}\mathbf{4}-\boldsymbol{m}_{t}^{2})} +
                                                                                                                                                                                                                                                                     (8/3\langle 24\rangle\langle 32\rangle\langle 2|3|2]...\langle 3 \text{ terms}\rangle...-8/3\langle 24\rangle\langle 32\rangle m_t^2)
                                                                                                                                                                                                                                                                                                                                                                                    (12)(s_{124}-m_{+}^{2})
                                                                                                                                                                                                                                                                                                                                                                               \frac{-8/3\langle 2|\mathbf{3}|\mathbf{4}][\mathbf{3}|\mathbf{4}|2\rangle}{\langle 12\rangle(s_{12}\mathbf{4}-m_{t}^{2})}+
                                                                                                                                                                                                                                                                                                                                                                    \frac{-8/3 \text{tr}(\mathbf{3}|\mathbf{4}) \langle 2|\mathbf{4}|1] \langle \mathbf{3}\mathbf{4} \rangle}{\langle 12 \rangle [12] (s_{12}\mathbf{4} - m_t^2)} +
                     (\operatorname{tr}(\mathbf{5}|\mathbf{3})\operatorname{tr}(\mathbf{5}|\mathbf{4}) - 2m_L^2\operatorname{tr}(\mathbf{3}|\mathbf{4}))m_t((2|\mathbf{3}|\mathbf{1} + 2|\mathbf{4}|\mathbf{1}] - (2|\mathbf{4}|\mathbf{1} + 2|\mathbf{3}|\mathbf{1}])(-3/16\langle\mathbf{3}2\rangle[2\mathbf{4}]\langle\mathbf{2}|\mathbf{4}|2]m_t^2\ldots \langle\!\langle\mathbf{2}9\operatorname{terms}\rangle\!\rangle\ldots - 1/4\operatorname{str}(\mathbf{3}|\mathbf{4})\langle\mathbf{2}|\mathbf{3}|\mathbf{4}|\langle\mathbf{3}|\mathbf{4}|2])
                                                                                                                                                                                                                                                                                                                                                                             \langle 12 \rangle [12] \Delta^{2}_{12|3|4|5}
                   m_t(\operatorname{tr}(\mathbf{5}|\mathbf{3})\operatorname{tr}(\mathbf{3}|\mathbf{4}) - 2m_t^2\operatorname{tr}(\mathbf{5}|\mathbf{4}))(\langle 2|\mathbf{3}|1 + 2|\mathbf{4}|1] - \langle 2|\mathbf{4}|1 + 2|\mathbf{3}|1])(5/24\langle 1|\mathbf{3}|2]\langle \mathbf{3}2\rangle\langle 2|\mathbf{3}|2][14]\ldots\langle 45\operatorname{terms}\rangle \ldots + 1/4\operatorname{8tr}(\mathbf{3}|\mathbf{4})\langle 2|\mathbf{3}|4|\langle \mathbf{3}|4|2]\rangle
                                                                                                                                                                                                                                                                                                                                                                             \langle 12 \rangle [12] \Delta^2_{12|\mathbf{3}|\mathbf{4}|\mathbf{5}}
               m_t((3)@([1|2|3+4|4|3+4|-|1|3+4|1|4|3+4|+|1|3+4|3+4|4|1+2|-|3+4|2|3+4|4|1+2|)@[4])(3/8\langle1|3|1]-3/8\langle2|3|2|+3/8\mathrm{tr}(3|4)-3/4m_t^2)
                                                                                                                                                                                                                                                                                                                                                                                 \langle 1|{\bf 5}|2]\Delta_{12|{\bf 3}|{\bf 4}|{\bf 5}}
                                                                                                                                                                                                                                                                                                                                             \frac{m_{t}(3/2\langle \mathbf{32}\rangle[2\mathbf{4}]-3/2[1\mathbf{4}]\langle \mathbf{31}\rangle)}{\langle 1|\mathbf{5}|2|}+
                                                                                                                                                                                                                                                                                                                                                                                                      \frac{3m_t^2\langle 34\rangle}{\langle 1|5|2|} +
                                                                                                                   \frac{(\mathrm{tr}(\mathbf{5}|\mathbf{3})\mathrm{tr}(\mathbf{5}|\mathbf{4}) - 2m_h^2\mathrm{tr}(\mathbf{3}|\mathbf{4}))m_t^2(-1/3\langle\mathbf{3}|\mathbf{4}|1]\langle2|\mathbf{3}|\mathbf{4}|2\rangle\langle1\mathbf{4}\rangle\dots\langle11\,\mathrm{terms}\rangle\dots -1/3\langle2\mathbf{4}\rangle\langle2|\mathbf{3}|\mathbf{4}|2\rangle\langle\mathbf{3}|\mathbf{4}|2)}{\langle12\rangle\Delta_{12}\mathbf{4}|\mathbf{3}|\mathbf{5}^{\Delta_{12}}|\mathbf{3}|\mathbf{4}|\mathbf{5}}.
                                                                                                                                                                                 \frac{(2|3|4|2)[34](\mathrm{tr}(\mathbf{5}|\mathbf{3})\mathrm{tr}(\mathbf{5}|4) - 2m_{R}^{2}\mathrm{tr}(\mathbf{3}|4))m_{L}^{2}(1/6\mathrm{tr}(\mathbf{3}|4) + 1/6(2|3|2] + 1/6(1|3|1))}{(12)\Delta_{124}|3|5}\Delta_{123|4|5} +
                                                                                                                                                                                 \frac{m_t(1/4\langle 2\mathbf{4}\rangle[\mathbf{32}]\langle 2|\mathbf{3}|\mathbf{4}|2\rangle\langle 1|\mathbf{4}|1]\ldots\langle\!\langle 16\,\mathrm{terms}\rangle\!\rangle\ldots+1/4[\mathbf{31}]\langle 2|\mathbf{3}|\mathbf{4}|2\rangle\langle 1\mathbf{4}\rangle\mathrm{tr}(\mathbf{3}|\mathbf{4}))}{\langle 12\rangle\Delta_{12}|\mathbf{3}|\mathbf{4}|5}+
                                                                                                                                                                                                   m_t(1/6\text{tr}(\mathbf{3}|\mathbf{4})\langle 2|\mathbf{3}|\mathbf{4}][1|\mathbf{3}|\mathbf{4}|1]\langle \mathbf{3}1\rangle \dots \langle (14\text{ terms}) \dots + 2/3\langle \mathbf{3}2\rangle[2\mathbf{4}]\langle 2|\mathbf{4}|1]m_t^4)
                                                                                                                                                                                                                                                                                                                                                                             \langle 12 \rangle [12] \Delta_{12|3|4|5}
                                                                                                                                                                            \frac{\operatorname{tr}(\mathbf{3}|\mathbf{4})\langle 2|\mathbf{3}|\mathbf{4}|2\rangle[\mathbf{3}\mathbf{4}](-1/3\operatorname{tr}(\mathbf{3}|\mathbf{4})+1/3\langle 1|\mathbf{3}|1]+1/3\langle 2|\mathbf{3}|2])}{\langle 12\rangle\Delta_{12}|\mathbf{3}|\mathbf{4}|\mathbf{5}}+
                                                                                                                                                                                                                                            \frac{\mathbf{tr}(\mathbf{3}|\mathbf{4})(-2/3\langle\mathbf{3}|\mathbf{4}|1]\langle2|\mathbf{3}|\mathbf{4}|2\rangle[2|\mathbf{3}|\mathbf{4}\rangle-2/3\langle\mathbf{3}\mathbf{4}\rangle[1|\mathbf{3}|\mathbf{4}|1]\langle1|\mathbf{3}|\mathbf{4}|2\rangle)}{\langle12\rangle[12]\Delta_{12}|\mathbf{3}|\mathbf{4}|\mathbf{5}} + \\
                                                                                                                                                                                                                                                                                                                                                                                   (12345 \rightarrow \overline{21345})
```