

Тестовый прогон: Было:

$$\phi_1(-p) \times \delta_{13}[k_1] \times D_1^A D_{1A} \bar{D}_{2a} \bar{D}_2^{\dot{a}} \delta_{12}[p+k_1] \times D_2^B D_{2B} \bar{D}_{3b} \bar{D}_3^{\dot{b}} \delta_{23}[p+k_1+k_2] \times \delta_{24}[k_2] \times D_3^C D_{3C} \bar{D}_{4c} \bar{D}_4^{\dot{c}} \delta_{34}[p+k_2] \times \bar{\phi}_4(p)$$

Выравниваем индекс у 2-ого слагаемого 3-ого, 5-ого сомножителей (дельта-функций)

$$-\phi_1(-p) \times \delta_{13}[k_1] \times D_1^A D_{1A} \bar{D}_1^{\dot{a}} \bar{D}_{1\dot{a}} \delta_{12}[p+k_1] \times D_2^B D_{2B} \bar{D}_2^{\dot{b}} \bar{D}_{2\dot{b}} \delta_{23}[p+k_1+k_2] \times \delta_{24}[k_2] \times D_3^C D_{3C} \bar{D}_3^{\dot{c}} \bar{D}_{3\dot{c}} \delta_{34}[p+k_2] \times \bar{\phi}_4(p)$$

Опускаем индексы у 0-ого слагаемого

$$-\epsilon^{\dot{c},\dot{f}} \epsilon^{C,F} \epsilon^{b,\dot{e}} \epsilon^{B,E} \epsilon^{\dot{a},\dot{d}} \epsilon^{A,D} \phi_1(-p) \times \delta_{13}[k_1] \times D_{1D} D_{1A} \bar{D}_{1\dot{d}} \bar{D}_{1\dot{a}} \delta_{12}[p+k_1] \times D_{2E} D_{2B} \bar{D}_{2\dot{e}} \bar{D}_{2\dot{b}} \delta_{23}[p+k_1+k_2] \times \delta_{24}[k_2] \times D_{3F} D_{3C} \bar{D}_{3\dot{f}} \bar{D}_{3\dot{c}} \delta_{34}[p+k_2] \times \bar{\phi}_4(p)$$

Избавляемся от голых дельта-функций good good nothing, *o\_d o*

$$-\epsilon^{\dot{c},\dot{f}} \epsilon^{C,F} \epsilon^{b,\dot{e}} \epsilon^{B,E} \epsilon^{\dot{a},\dot{d}} \epsilon^{A,D} \phi_1(-p) \times D_{1D} D_{1A} \bar{D}_{1\dot{d}} \bar{D}_{1\dot{a}} \delta_{12}[p+k_1] \times D_{2E} D_{2B} \bar{D}_{2\dot{e}} \bar{D}_{2\dot{b}} \delta_{21}[p+k_1+k_2] \times D_{1F} D_{1C} \bar{D}_{1\dot{f}} \bar{D}_{1\dot{c}} \delta_{12}[p+k_2] \times \bar{\phi}_2(p)$$

Выравниваем индекс у 0-ого слагаемого, 2-ого сомножителя (дельта-функций)

$$-\epsilon^{\dot{c},\dot{f}} \epsilon^{C,F} \epsilon^{b,\dot{e}} \epsilon^{B,E} \epsilon^{\dot{a},\dot{d}} \epsilon^{A,D} \phi_1(-p) \times D_{1D} D_{1A} \bar{D}_{1\dot{d}} \bar{D}_{1\dot{a}} \delta_{12}[p+k_1] \times \bar{D}_{1\dot{b}} \bar{D}_{1\dot{e}} D_{1B} D_{1E} \delta_{21}[p+k_1+k_2] \times D_{1F} D_{1C} \bar{D}_{1\dot{f}} \bar{D}_{1\dot{c}} \delta_{12}[p+k_2] \times \bar{\phi}_2(p)$$

Скоммутируем производные во 2-ом сомножителе

$$-\epsilon^{\dot{c},\dot{f}} \epsilon^{C,F} \epsilon^{b,\dot{e}} \epsilon^{B,E} \epsilon^{\dot{a},\dot{d}} \epsilon^{A,D} \phi_1(-p) \times D_{1D} D_{1A} \bar{D}_{1\dot{d}} \bar{D}_{1\dot{a}} \delta_{12}[p+k_1] \times D_{1B} D_{1E} \bar{D}_{1\dot{b}} \bar{D}_{1\dot{e}} \delta_{21}[p+k_1+k_2] \times D_{1F} D_{1C} \bar{D}_{1\dot{f}} \bar{D}_{1\dot{c}} \delta_{12}[p+k_2] \times \bar{\phi}_2(p) -$$

$$-2\sigma_{E\dot{b}}^a(p+k_1+k_2)_a \epsilon^{\dot{c},\dot{f}} \epsilon^{C,F} \epsilon^{b,\dot{e}} \epsilon^{B,E} \epsilon^{\dot{a},\dot{d}} \epsilon^{A,D} \phi_1(-p) \times D_{1D} D_{1A} \bar{D}_{1\dot{d}} \bar{D}_{1\dot{a}} \delta_{12}[p+k_1] \times D_{1B} \bar{D}_{1\dot{e}} \delta_{21}[p+k_1+k_2] \times D_{1F} D_{1C} \bar{D}_{1\dot{f}} \bar{D}_{1\dot{c}} \delta_{12}[p+k_2] \times \bar{\phi}_2(p) +$$

$$+2\sigma_{B\dot{b}}^a(p+k_1+k_2)_a \epsilon^{\dot{c},\dot{f}} \epsilon^{C,F} \epsilon^{b,\dot{e}} \epsilon^{B,E} \epsilon^{\dot{a},\dot{d}} \epsilon^{A,D} \phi_1(-p) \times D_{1D} D_{1A} \bar{D}_{1\dot{d}} \bar{D}_{1\dot{a}} \delta_{12}[p+k_1] \times D_{1E} \bar{D}_{1\dot{e}} \delta_{21}[p+k_1+k_2] \times D_{1F} D_{1C} \bar{D}_{1\dot{f}} \bar{D}_{1\dot{c}} \delta_{12}[p+k_2] \times \bar{\phi}_2(p) +$$

$$+2\sigma_{E\dot{e}}^a(p+k_1+k_2)_a \epsilon^{\dot{c},\dot{f}} \epsilon^{C,F} \epsilon^{b,\dot{e}} \epsilon^{B,E} \epsilon^{\dot{a},\dot{d}} \epsilon^{A,D} \phi_1(-p) \times D_{1D} D_{1A} \bar{D}_{1\dot{d}} \bar{D}_{1\dot{a}} \delta_{12}[p+k_1] \times D_{1B} \bar{D}_{1\dot{b}} \delta_{21}[p+k_1+k_2] \times D_{1F} D_{1C} \bar{D}_{1\dot{f}} \bar{D}_{1\dot{c}} \delta_{12}[p+k_2] \times \bar{\phi}_2(p) +$$

$$+4\sigma_{B\dot{b}}^b(p+k_1+k_2)_b \sigma_{E\dot{e}}^a(p+k_1+k_2)_a \epsilon^{\dot{c},\dot{f}} \epsilon^{C,F} \epsilon^{b,\dot{e}} \epsilon^{B,E} \epsilon^{\dot{a},\dot{d}} \epsilon^{A,D} \phi_1(-p) \times D_{1D} D_{1A} \bar{D}_{1\dot{d}} \bar{D}_{1\dot{a}} \delta_{12}[p+k_1] \times \delta_{21}[p+k_1+k_2] \times D_{1F} D_{1C} \bar{D}_{1\dot{f}} \bar{D}_{1\dot{c}} \delta_{12}[p+k_2] \times \bar{\phi}_2(p) -$$

$$-2\sigma_{B\dot{e}}^a(p+k_1+k_2)_a \epsilon^{\dot{c},\dot{f}} \epsilon^{C,F} \epsilon^{b,\dot{e}} \epsilon^{B,E} \epsilon^{\dot{a},\dot{d}} \epsilon^{A,D} \phi_1(-p) \times D_{1D} D_{1A} \bar{D}_{1\dot{d}} \bar{D}_{1\dot{a}} \delta_{12}[p+k_1] \times D_{1E} \bar{D}_{1\dot{b}} \delta_{21}[p+k_1+k_2] \times D_{1F} D_{1C} \bar{D}_{1\dot{f}} \bar{D}_{1\dot{c}} \delta_{12}[p+k_2] \times \bar{\phi}_2(p) -$$

$$-4\sigma_{E\dot{b}}^b(p+k_1+k_2)_b \sigma_{B\dot{e}}^a(p+k_1+k_2)_a \epsilon^{\dot{c},\dot{f}} \epsilon^{C,F} \epsilon^{b,\dot{e}} \epsilon^{B,E} \epsilon^{\dot{a},\dot{d}} \epsilon^{A,D} \phi_1(-p) \times D_{1D} D_{1A} \bar{D}_{1\dot{d}} \bar{D}_{1\dot{a}} \delta_{12}[p+k_1] \times \delta_{21}[p+k_1+k_2] \times D_{1F} D_{1C} \bar{D}_{1\dot{f}} \bar{D}_{1\dot{c}} \delta_{12}[p+k_2] \times \bar{\phi}_2(p)$$

Запускаем ЦИКЛ WORKOUT-ов дельта-функций:

$$-16\epsilon_{\dot{f},\dot{c}} \epsilon_{F,C} \epsilon_{b,\dot{e}} \epsilon_{B,E} \epsilon^{\dot{c},\dot{f}} \epsilon^{C,F} \epsilon^{b,\dot{e}} \epsilon^{B,E} \epsilon^{\dot{a},\dot{d}} \epsilon^{A,D} \bar{D}_{1\dot{a}} \bar{D}_{1\dot{d}} D_{1A} D_{1D} \phi_1(-p) \times \bar{\phi}_1(p) +$$

$$+16\epsilon_{\dot{f},\dot{c}} \epsilon_{F,C} \epsilon_{b,\dot{e}} \epsilon_{B,E} \epsilon^{\dot{c},\dot{f}} \epsilon^{C,F} \epsilon^{b,\dot{e}} \epsilon^{B,E} \epsilon^{\dot{a},\dot{d}} \epsilon^{A,D} \bar{D}_{1\dot{d}} D_{1A} D_{1D} \phi_1(-p) \times \bar{D}_{1\dot{a}} \bar{\phi}_1(p) -$$

[illegible]

Запускаем ЦИКЛ WORKOUT-ов полей:

$$\begin{aligned}
& -64\sigma_{A\dot{a}}^b(-p)_b\sigma_{D\dot{d}}^a(-p)_a\epsilon_{f,\dot{c}}\epsilon_{F,C}\epsilon_{b,\dot{e}}\epsilon_{B,E}\epsilon^{\dot{c},\dot{f}}\epsilon^{C,F}\epsilon^{\dot{b},\dot{e}}\epsilon^{B,E}\epsilon^{\dot{a},\dot{d}}\epsilon^{A,D}\phi_1(-p)\times\bar{\phi}_1(p)+ \\
& +64\sigma_{D\dot{a}}^b(-p)_b\sigma_{A\dot{d}}^a(-p)_a\epsilon_{f,\dot{c}}\epsilon_{F,C}\epsilon_{b,\dot{e}}\epsilon_{B,E}\epsilon^{\dot{c},\dot{f}}\epsilon^{C,F}\epsilon^{\dot{b},\dot{e}}\epsilon^{B,E}\epsilon^{\dot{a},\dot{d}}\epsilon^{A,D}\phi_1(-p)\times\bar{\phi}_1(p)+ \\
& +64\sigma_{A\dot{d}}^b(-p)_b\sigma_{D\dot{a}}^a(-p)_a\epsilon_{f,\dot{c}}\epsilon_{F,C}\epsilon_{b,\dot{e}}\epsilon_{B,E}\epsilon^{\dot{c},\dot{f}}\epsilon^{C,F}\epsilon^{\dot{b},\dot{e}}\epsilon^{B,E}\epsilon^{\dot{a},\dot{d}}\epsilon^{A,D}\phi_1(-p)\times\bar{\phi}_1(p)- \\
& -64\sigma_{D\dot{d}}^b(-p)_b\sigma_{A\dot{a}}^a(-p)_a\epsilon_{f,\dot{c}}\epsilon_{F,C}\epsilon_{b,\dot{e}}\epsilon_{B,E}\epsilon^{\dot{c},\dot{f}}\epsilon^{C,F}\epsilon^{\dot{b},\dot{e}}\epsilon^{B,E}\epsilon^{\dot{a},\dot{d}}\epsilon^{A,D}\phi_1(-p)\times\bar{\phi}_1(p)- \\
& -64\sigma_{A\dot{d}}^b(-p)_b\sigma_{D\dot{a}}^a(-p)_a\epsilon_{f,\dot{c}}\epsilon_{F,C}\epsilon_{b,\dot{e}}\epsilon_{B,E}\epsilon^{\dot{c},\dot{f}}\epsilon^{C,F}\epsilon^{\dot{b},\dot{e}}\epsilon^{B,E}\epsilon^{\dot{a},\dot{d}}\epsilon^{A,D}\phi_1(-p)\times\bar{\phi}_1(p)+ \\
& +64\sigma_{D\dot{d}}^b(-p)_b\sigma_{A\dot{a}}^a(-p)_a\epsilon_{f,\dot{c}}\epsilon_{F,C}\epsilon_{b,\dot{e}}\epsilon_{B,E}\epsilon^{\dot{c},\dot{f}}\epsilon^{C,F}\epsilon^{\dot{b},\dot{e}}\epsilon^{B,E}\epsilon^{\dot{a},\dot{d}}\epsilon^{A,D}\phi_1(-p)\times\bar{\phi}_1(p)+ \\
& +64\sigma_{B\dot{e}}^b(-p)_b\epsilon_{f,\dot{c}}\epsilon_{F,C}\epsilon_{d,\dot{a}}\epsilon_{D,A}\sigma_{E\dot{b}}^a(p+k_1+k_2)_a\epsilon^{\dot{c},\dot{f}}\epsilon^{C,F}\epsilon^{\dot{b},\dot{e}}\epsilon^{B,E}\epsilon^{\dot{a},\dot{d}}\epsilon^{A,D}\phi_1(-p)\times\bar{\phi}_1(p)- \\
& -64\sigma_{E\dot{e}}^b(-p)_b\epsilon_{f,\dot{c}}\epsilon_{F,C}\epsilon_{d,\dot{a}}\epsilon_{D,A}\sigma_{B\dot{b}}^a(p+k_1+k_2)_a\epsilon^{\dot{c},\dot{f}}\epsilon^{C,F}\epsilon^{\dot{b},\dot{e}}\epsilon^{B,E}\epsilon^{\dot{a},\dot{d}}\epsilon^{A,D}\phi_1(-p)\times\bar{\phi}_1(p)- \\
& -64\sigma_{B\dot{b}}^b(-p)_b\epsilon_{f,\dot{c}}\epsilon_{F,C}\epsilon_{d,\dot{a}}\epsilon_{D,A}\sigma_{E\dot{e}}^a(p+k_1+k_2)_a\epsilon^{\dot{c},\dot{f}}\epsilon^{C,F}\epsilon^{\dot{b},\dot{e}}\epsilon^{B,E}\epsilon^{\dot{a},\dot{d}}\epsilon^{A,D}\phi_1(-p)\times\bar{\phi}_1(p)+ \\
& +64\epsilon_{f,\dot{c}}\epsilon_{F,C}\epsilon_{d,\dot{a}}\epsilon_{D,A}\sigma_{B\dot{b}}^b(p+k_1+k_2)_b\sigma_{E\dot{e}}^a(p+k_1+k_2)_a\epsilon^{\dot{c},\dot{f}}\epsilon^{C,F}\epsilon^{\dot{b},\dot{e}}\epsilon^{B,E}\epsilon^{\dot{a},\dot{d}}\epsilon^{A,D}\phi_1(-p)\times\bar{\phi}_1(p)+ \\
& +64\sigma_{E\dot{b}}^b(-p)_b\epsilon_{f,\dot{c}}\epsilon_{F,C}\epsilon_{d,\dot{a}}\epsilon_{D,A}\sigma_{B\dot{e}}^a(p+k_1+k_2)_a\epsilon^{\dot{c},\dot{f}}\epsilon^{C,F}\epsilon^{\dot{b},\dot{e}}\epsilon^{B,E}\epsilon^{\dot{a},\dot{d}}\epsilon^{A,D}\phi_1(-p)\times\bar{\phi}_1(p)- \\
& -64\epsilon_{f,\dot{c}}\epsilon_{F,C}\epsilon_{d,\dot{a}}\epsilon_{D,A}\sigma_{E\dot{b}}^b(p+k_1+k_2)_b\sigma_{B\dot{e}}^a(p+k_1+k_2)_a\epsilon^{\dot{c},\dot{f}}\epsilon^{C,F}\epsilon^{\dot{b},\dot{e}}\epsilon^{B,E}\epsilon^{\dot{a},\dot{d}}\epsilon^{A,D}\phi_1(-p)\times\bar{\phi}_1(p)
\end{aligned}$$