Diagrams and algebraic expressions at order 4 in BMBPT

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Valid diagrams: 568
2N valid diagrams: 568
2N canonical diagrams for the energy: 82
2N canonical diagrams for a generic operator only: 48
2N non-canonical diagrams: 438

Contents

1 Time-structure diagrams

1.1 Tree diagrams

Time-structure diagram T1:

$$\mathrm{T1} = \frac{1}{(a_1 + a_3 + a_4)a_2(a_3 + a_4)a_4} \tag{1}$$

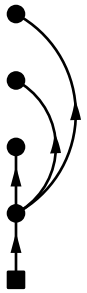
Resummation power: 4
Number of related Feynman diagrams: 19.
Related Feynman diagrams: 90, 89, 88, 87, 86, 85, 84, 83, 82, 81, 80, 12, 11, 10, 9, 8, 7, 6, 5.

Time-structure diagram T2:

$$\mathrm{T2} = \frac{1}{a_1(a_2+a_3+a_4)a_3a_4} \tag{2}$$

Resummation power: 8
Number of related Feynman diagrams: 4.
Related Feynman diagrams: 223, 222, 221, 61.

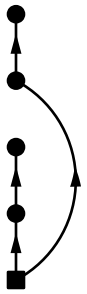
Time-structure diagram T3:



$$\mathrm{T3} = \frac{1}{(a_1+a_2+a_3+a_4)a_2a_3a_4} \tag{3}$$

Resummation power: 6
Number of related Feynman diagrams: 4.
Related Feynman diagrams: 495, 411, 246, 224.

Time-structure diagram T4:



$$\mathrm{T4} = \frac{1}{(a_1+a_2)a_2(a_3+a_4)a_4} \tag{4}$$

Resummation power: 6
Number of related Feynman diagrams: 10.
Related Feynman diagrams: 227, 226, 225, 65, 64, 63, 62, 3, 2, 1.

Time-structure diagram T5:

$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{5}$$

Resummation power: 3
Number of related Feynman diagrams: 66.
Related Feynman diagrams: 426, 425, 422, 92, 75, 72, 4, 500, 252, 501, 499, 498, 497, 496, 427, 424, 423, 421, 420, 419, 418, 417, 416, 415, 414, 413, 412, 265, 264, 263, 262, 261, 260, 259, 258, 257, 256, 255, 254, 253, 251, 250, 249, 248, 247, 229, 228, 95, 94, 93, 91, 79, 78, 77, 76, 74, 73, 71, 70, 69, 68, 67, 66, 15, 14, 13.

Time-structure diagram T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{6}$$

Resummation power: 1

Number of related Feynman diagrams: 205.

Related Feynman diagrams: 477, 476, 473, 462, 460, 458, 239, 233, 232, 188, 187, 186, 185, 181, 180, 178, 177, 172, 169, 161, 153, 144, 143, 142, 141, 138, 134, 132, 127, 42, 40, 36, 29, 27, 25, 23, 20, 544, 542, 538, 537, 534, 527, 520, 518, 368, 367, 364, 363, 362, 361, 360, 359, 354, 353, 336, 311, 310, 304, 303, 302, 300, 297, 296, 292, 291, 545, 543, 539, 536, 535, 533, 532, 531, 530, 529, 528, 526, 521, 519, 517, 516, 515, 514, 513, 512, 511, 510, 509, 508, 507, 506, 478, 475, 474, 472, 471, 470, 469, 468, 467, 466, 465, 464, 463, 461, 459, 457, 371, 370, 369, 366, 365, 352, 351, 350, 349, 348, 347, 346, 345, 344, 343, 342, 341, 340, 339, 338, 337, 335, 334, 333, 332, 331, 330, 329, 328, 327, 326, 325, 324, 323, 322, 312, 309, 308, 307, 306, 305, 301, 299, 298, 295, 294, 293, 290, 238, 237, 236, 190, 189, 179, 176, 175, 174, 173, 171, 170, 168, 167, 166, 165, 164, 163, 162, 160, 159, 158, 157, 156, 155, 154, 152, 140, 139, 137, 136, 135, 133, 131, 130, 129, 128, 39, 38, 37, 35, 34, 33, 28, 26, 24, 22, 21, 19.

Time-structure diagram T7:

$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{7}$$

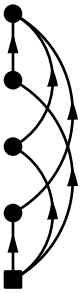
Resummation power: 2

Number of related Feynman diagrams: 44.

Related Feynman diagrams: 490, 488, 487, 214, 213, 210, 56, 564, 560, 403, 563, 562, 561, 559, 494, 493, 492, 491, 489, 486, 410, 409, 402, 401, 400, 399, 398, 397, 396, 395, 394, 393, 245, 243, 220, 219, 212, 211, 209, 208, 207, 55, 54, 53.

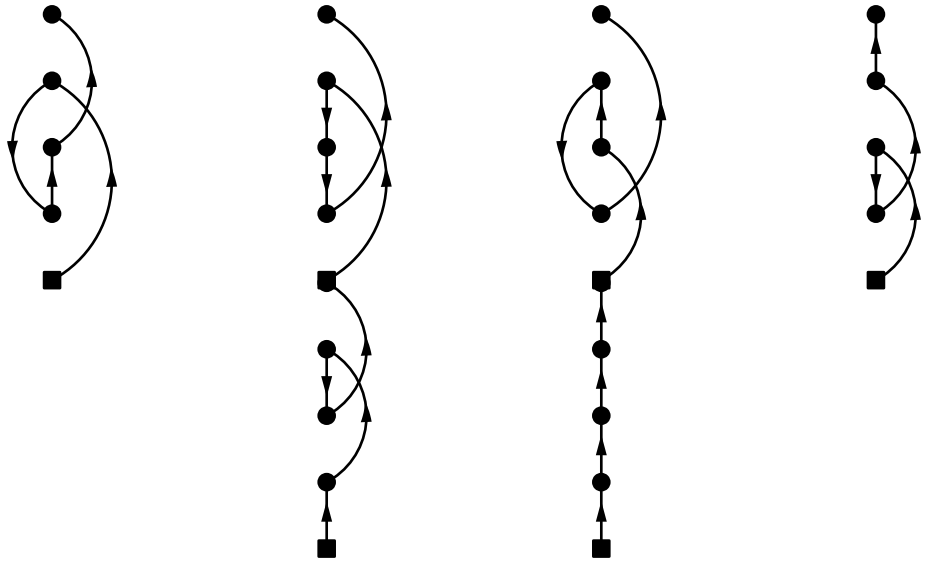
1.2 Non-tree diagrams

Time-structure diagram T8:



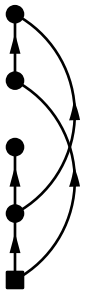
$$\mathrm{T8} = \frac{1}{(a_1+a_2+a_4)(a_2+a_4)(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_4)(a_2+a_1+a_4)(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_4)(a_2+a_1+a_3+} \tag{8}$$

Equivalent tree diagrams: T6, T6, T6, T6, T6, T6.



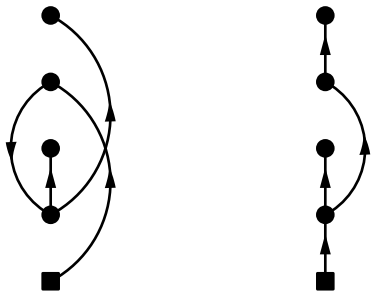
Number of related Feynman diagrams: 4.
Related Feynman diagrams: 196, 241, 379, 485.

Time-structure diagram T9:



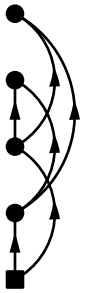
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{9}$$

Equivalent tree diagrams: T7, T5.



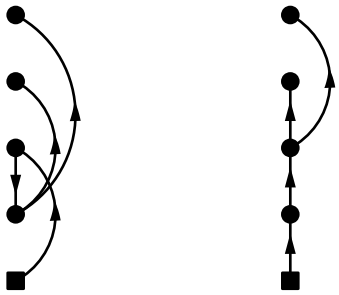
Number of related Feynman diagrams: 40.
Related Feynman diagrams: 97, 98, 99, 100, 101, 102, 104, 105, 106, 107, 108, 109, 230, 266, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 502, 503, 267, 16, 96, 103.

Time-structure diagram T10:



$$\mathrm{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{10}$$

Equivalent tree diagrams: T7, T7.



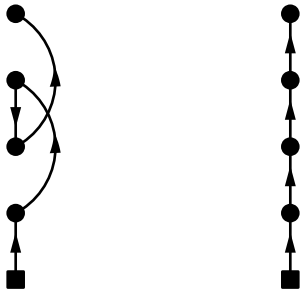
Number of related Feynman diagrams: 18.

Related Feynman diagrams: 57, 59, 60, 215, 218, 404, 407, 408, 565, 566, 567, 568, 405, 406, 58, 216, 217, 244.

Time-structure diagram T11:

$$\mathrm{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{11}$$

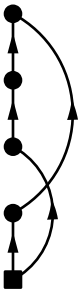
Equivalent tree diagrams: T6, T6.



Number of related Feynman diagrams: 40.

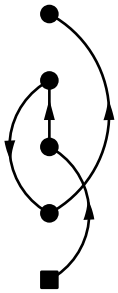
Related Feynman diagrams: 47, 49, 50, 52, 198, 200, 201, 203, 206, 380, 382, 383, 384, 386, 388, 391, 392, 550, 552, 553, 554, 555, 556, 557, 558, 381, 385, 387, 389, 390, 551, 46, 48, 51, 197, 199, 202, 204, 205, 242.

Time-structure diagram T12:



$$\mathrm{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{12}$$

Equivalent tree diagrams: T6, T6, T6.



Number of related Feynman diagrams: 66.

Related Feynman diagrams: 43, 44, 45, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 191, 192, 194, 195, 231, 240, 278, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 372, 373, 374, 375, 376, 377, 378, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 480, 482, 484, 504, 505, 546, 547, 549, 279, 548, 18, 113, 126, 193, 479, 481, 483.

Time-structure diagram T13:

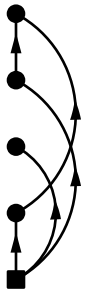
$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{13}$$

Equivalent tree diagrams: T6, T6.


Number of related Feynman diagrams: 44.

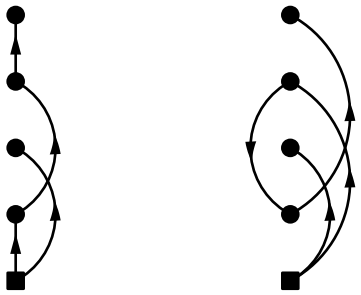
Related Feynman diagrams: 30, 31, 32, 145, 146, 148, 149, 150, 151, 183, 234, 235, 313, 314, 315, 316, 317, 318, 319, 320, 321, 356, 357, 358, 448, 451, 453, 454, 455, 456, 522, 524, 525, 541, 355, 523, 540, 41, 147, 182, 184, 449, 450, 452.

Time-structure diagram T14:



$$\mathrm{T14} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} + \frac{1}{(a_1+a_4)a_2(a_3+a_1+a_4)a_4} \tag{14}$$

Equivalent tree diagrams: T1, T1.



Number of related Feynman diagrams: 4.
Related Feynman diagrams: 17, 110, 111, 112.

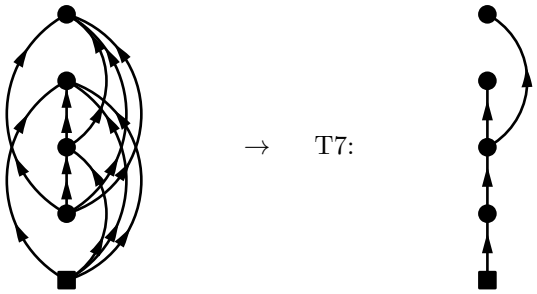
2 Two-body diagrams

2.1 Two-body energy canonical diagrams

Diagram 1:

$$\mathrm{PO4.1} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{22}_{k_9k_{10}k_5k_1}\Omega^{04}_{k_9k_2k_3k_4}\Omega^{04}_{k_{10}k_6k_7k_8}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau$$

$$= \frac{-(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{22}_{k_9k_{10}k_5k_1}\Omega^{04}_{k_9k_2k_3k_4}\Omega^{04}_{k_{10}k_6k_7k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_2k_3k_4k_6k_7k_8}\ \epsilon_{k_2k_3k_4k_9}\ \epsilon_{k_6k_7k_8k_{10}}} \tag{15}$$



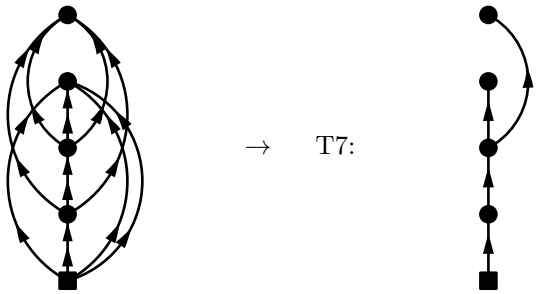
$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{16}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon^{k_9k_{10}}_{k_1k_5}$$
$$a_3 = \epsilon_{k_2k_3k_4k_9}$$
$$a_4 = \epsilon_{k_6k_7k_8k_{10}}$$

Diagram 2:

$$\mathrm{PO4.2} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{31}_{k_8k_9k_{10}k_5} \Omega^{04}_{k_8k_2k_3k_4} \Omega^{04}_{k_9k_{10}k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta($$

$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{31}_{k_8k_9k_{10}k_5} \Omega^{04}_{k_8k_2k_3k_4} \Omega^{04}_{k_9k_{10}k_6k_7}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_2k_3k_4k_6k_7}\ \epsilon_{k_2k_3k_4k_8}\ \epsilon_{k_6k_7k_9k_{10}}} \tag{17}$$



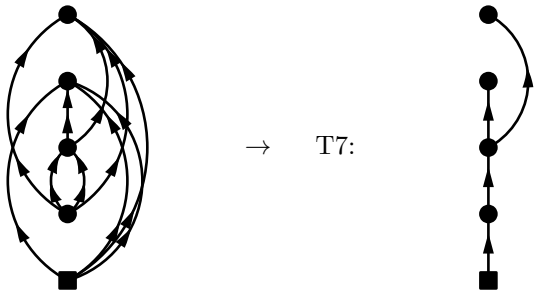
$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{18}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon^{k_8k_9k_{10}}_{k_5}$$
$$a_3 = \epsilon_{k_2k_3k_4k_8}$$
$$a_4 = \epsilon_{k_6k_7k_9k_{10}}$$

Diagram 3:

$$\mathrm{PO4.3} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{22}_{k_9k_{10}k_5k_6} \Omega^{04}_{k_9k_1k_2k_3} \Omega^{04}_{k_{10}k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta($$

$$= \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{22}_{k_9k_{10}k_5k_6} \Omega^{04}_{k_9k_1k_2k_3} \Omega^{04}_{k_{10}k_7k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_1k_2k_3k_4k_7k_8}\ \epsilon_{k_1k_2k_3k_9}\ \epsilon_{k_4k_7k_8k_{10}}} \tag{19}$$



$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{20}$$

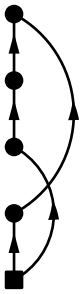
$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon^{k_9k_{10}}_{k_5k_6}$$
$$a_3 = \epsilon_{k_1k_2k_3k_9}$$
$$a_4 = \epsilon_{k_4k_7k_8k_{10}}$$

Diagram 4:

$$\mathrm{PO4.4} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{31}_{k_6k_7k_8k_4} \Omega^{22}_{k_9k_{10}k_6k_7} \Omega^{04}_{k_9k_{10}k_8k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta($$

$$= \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{31}_{k_6k_7k_8k_4} \Omega^{22}_{k_9k_{10}k_6k_7} \Omega^{04}_{k_9k_{10}k_8k_5} \left[\frac{1}{\epsilon_{k_1k_2k_3k_8k_9k_{10}}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_6k_7k_8}\ \epsilon_{k_5k_8k_9k_{10}}} + \frac{}{\epsilon_{k_1}} \right. \tag{21}$$

$\rightarrow$ T12:



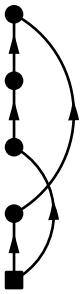
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{22}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\ a_2 &= \epsilon^{k_6k_7k_8}_{k_4} \\ a_3 &= \epsilon^{k_9k_{10}}_{k_6k_7} \\ a_4 &= \epsilon_{k_5k_8k_9k_{10}} \end{aligned}$$

Diagram 5:

$$\begin{aligned} \text{PO4.5} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{40}_{k_6k_7k_8k_9} \Omega^{13}_{k_{10}k_6k_7k_4} \Omega^{04}_{k_{10}k_8k_9k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\\ &= \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{40}_{k_6k_7k_8k_9} \Omega^{13}_{k_{10}k_6k_7k_4} \Omega^{04}_{k_{10}k_8k_9k_5} \left[\frac{1}{\epsilon_{k_1k_2k_3k_8k_9k_{10}}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_4k_6k_7k_8k_9}\ \epsilon_{k_5k_8k_9k_{10}}} + \right. \end{aligned} \tag{23}$$

$\rightarrow$ T12:



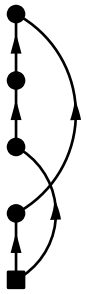
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{24}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\ a_2 &= \epsilon^{k_6k_7k_8k_9} \\ a_3 &= \epsilon^{k_{10}}_{k_4k_6k_7} \\ a_4 &= \epsilon_{k_5k_8k_9k_{10}} \end{aligned}$$

Diagram 6:

$$\begin{aligned} \text{PO4.6} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{40}_{k_6k_7k_8k_9} \Omega^{13}_{k_{10}k_6k_7k_8} \Omega^{04}_{k_{10}k_9k_5k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4 \\ &= \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{40}_{k_6k_7k_8k_9} \Omega^{13}_{k_{10}k_6k_7k_8} \Omega^{04}_{k_{10}k_9k_5k_4} \left[\frac{1}{\epsilon_{k_1k_2k_3k_4k_9k_{10}}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_6k_7k_8k_4k_9}\ \epsilon_{k_4k_5k_9k_{10}}} + \right. \end{aligned} \tag{25}$$

$\rightarrow$ T12:

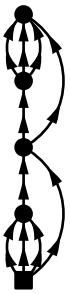


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{26}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\ a_2 &= \epsilon^{k_6k_7k_8k_9} \\ a_3 &= \epsilon^{k_{10}}_{k_6k_7k_8} \\ a_4 &= \epsilon_{k_4k_5k_9k_{10}} \end{aligned}$$

Diagram 7:

$$\begin{aligned} \text{PO4.7} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{22}_{k_6k_7k_5k_4} \Omega^{31}_{k_8k_9k_{10}k_6} \Omega^{04}_{k_8k_9k_{10}k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4 \\ &= \frac{(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{22}_{k_6k_7k_5k_4} \Omega^{31}_{k_8k_9k_{10}k_6} \Omega^{04}_{k_8k_9k_{10}k_7}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_5}\ \epsilon_{k_6k_7}\ \epsilon_{k_7k_8k_9k_{10}}} \end{aligned} \tag{27}$$



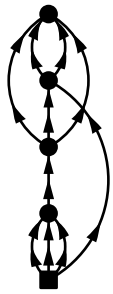
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{28}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\ a_2 &= \epsilon^{k_6k_7}_{k_4k_5} \\ a_3 &= \epsilon^{k_8k_9k_{10}}_{k_6} \\ a_4 &= \epsilon_{k_7k_8k_9k_{10}} \end{aligned}$$

Diagram 8:

$$\begin{aligned} \text{PO4.8} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{31}_{k_6k_7k_8k_5} \Omega^{22}_{k_9k_{10}k_6k_4} \Omega^{04}_{k_9k_{10}k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\\ &= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{31}_{k_6k_7k_8k_5} \Omega^{22}_{k_9k_{10}k_6k_4} \Omega^{04}_{k_9k_{10}k_7k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_4}\ \epsilon_{k_4k_6k_7k_8}\ \epsilon_{k_7k_8k_9k_{10}}} \end{aligned} \tag{29}$$



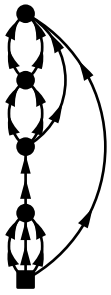
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{30}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\ a_2 &= \epsilon^{k_6k_7k_8}_{k_5} \\ a_3 &= \epsilon^{k_9k_{10}}_{k_4k_6} \\ a_4 &= \epsilon_{k_7k_8k_9k_{10}} \end{aligned}$$

Diagram 9:

$$\begin{aligned} \mathrm{PO4.9} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{22}_{k_9k_{10}k_6k_7}\Omega^{04}_{k_9k_{10}k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\\ &= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{22}_{k_9k_{10}k_6k_7}\Omega^{04}_{k_9k_{10}k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_4}\ \epsilon_{k_6k_7k_4k_8}\ \epsilon_{k_4k_8k_9k_{10}}} \end{aligned} \tag{31}$$



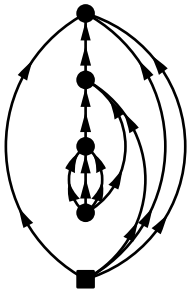
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{32}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\ a_2 &= \epsilon^{k_6k_7k_8}_{k_5} \\ a_3 &= \epsilon^{k_9k_{10}}_{k_6k_7} \\ a_4 &= \epsilon_{k_4k_8k_9k_{10}} \end{aligned}$$

Diagram 10:

$$\begin{aligned} \mathrm{PO4.10} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_6k_7}\Omega^{13}_{k_{10}k_9k_8k_1}\Omega^{04}_{k_{10}k_2k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_ \\ &= \frac{(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_6k_7}\Omega^{13}_{k_{10}k_9k_8k_1}\Omega^{04}_{k_{10}k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_7k_1k_8k_2k_3k_4}\ \epsilon_{k_1k_8k_9k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_{10}}} \end{aligned} \tag{33}$$



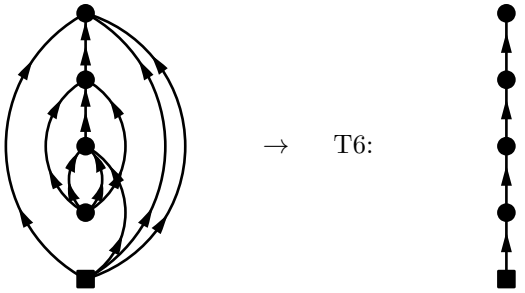
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{34}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon^{k_9}_{k_5k_6k_7} \\ a_3 &= \epsilon^{k_{10}}_{k_1k_8k_9} \\ a_4 &= \epsilon_{k_2k_3k_4k_{10}} \end{aligned}$$

Diagram 11:

$$\begin{aligned} \mathrm{PO4.11} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_6k_1}\Omega^{13}_{k_{10}k_9k_7k_8}\Omega^{04}_{k_{10}k_2k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta \\ &= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_6k_1}\Omega^{13}_{k_{10}k_9k_7k_8}\Omega^{04}_{k_{10}k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_7k_8k_2k_3k_4}\ \epsilon_{k_7k_8k_9k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_{10}}} \end{aligned} \tag{35}$$

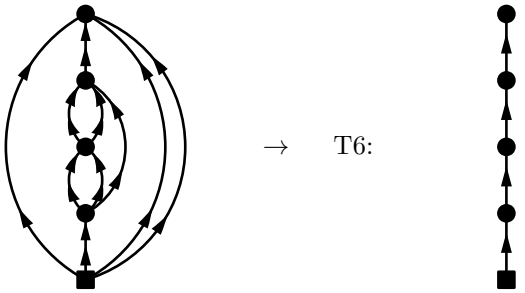


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{36}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon^{k_9}_{k_1k_5k_6} \\ a_3 &= \epsilon^{k_{10}}_{k_7k_8k_9} \\ a_4 &= \epsilon_{k_2k_3k_4k_{10}} \end{aligned}$$

Diagram 12:

$$\begin{aligned} \mathrm{PO4.12} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_5k_6}\Omega^{13}_{k_{10}k_8k_9k_7}\Omega^{04}_{k_{10}k_2k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta \\ &= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_5k_6}\Omega^{13}_{k_{10}k_8k_9k_7}\Omega^{04}_{k_{10}k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_7k_2k_3k_4}\ \epsilon_{k_7k_8k_9k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_{10}}} \end{aligned} \tag{37}$$

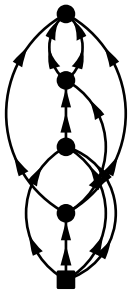


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{38}$$

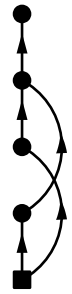
$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\
a_2 &= \epsilon^{k_8k_9}_{k_5k_6} \\
a_3 &= \epsilon^{k_{10}}_{k_7k_8k_9} \\
a_4 &= \epsilon_{k_2k_3k_4k_{10}}
\end{aligned}
$$

Diagram 13:

$$
\begin{aligned}
\mathrm{PO4.13} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_2k_3k_4} \Omega^{22}_{k_9k_{10}k_8k_5} \Omega^{04}_{k_9k_{10}k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta \\
&= \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_2k_3k_4} \Omega^{22}_{k_9k_{10}k_8k_5} \Omega^{04}_{k_9k_{10}k_6k_7} \left[\frac{1}{\epsilon_{k_1k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_8k_6k_7}\ \epsilon_{k_6k_7k_9k_{10}}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3}} \right.
\end{aligned} \tag{39}
$$



$\rightarrow$ T13:

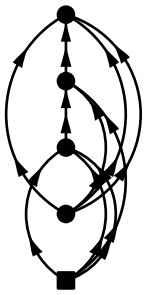


$$
\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{40}
$$

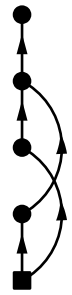
$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\
a_2 &= \epsilon^{k_8}_{k_2k_3k_4} \\
a_3 &= \epsilon^{k_9k_{10}}_{k_5k_8} \\
a_4 &= \epsilon_{k_6k_7k_9k_{10}}
\end{aligned}
$$

Diagram 14:

$$
\begin{aligned}
\mathrm{PO4.14} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_1k_2k_3} \Omega^{13}_{k_{10}k_9k_5k_4} \Omega^{04}_{k_{10}k_6k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\\
&= \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_1k_2k_3} \Omega^{13}_{k_{10}k_9k_5k_4} \Omega^{04}_{k_{10}k_6k_7k_8} \left[\frac{1}{\epsilon_{k_4k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_5k_9k_6k_7k_8}\ \epsilon_{k_6k_7k_8k_{10}}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon} \right.
\end{aligned} \tag{41}
$$



$\rightarrow$ T13:

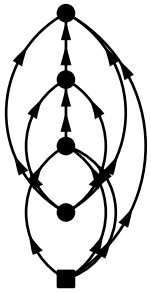


$$
\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{42}
$$

$$a_1 = \epsilon^{k_5 k_6 k_7 k_8}$$
$$a_2 = \epsilon^{k_9}_{k_1 k_2 k_3}$$
$$a_3 = \epsilon^{k_{10}}_{k_4 k_5 k_9}$$
$$a_4 = \epsilon_{k_6 k_7 k_8 k_{10}}$$

Diagram 15:

$$\mathrm{PO4.15} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_1k_2k_3}\Omega^{13}_{k_{10}k_9k_5k_6}\Omega^{04}_{k_{10}k_7k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta$$
$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_1k_2k_3}\Omega^{13}_{k_{10}k_9k_5k_6}\Omega^{04}_{k_{10}k_7k_8k_4}\left[\frac{1}{\epsilon_{k_9k_4}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_9k_4k_7k_8}\ \epsilon_{k_4k_7k_8k_{10}}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ } \right. \tag{43}$$



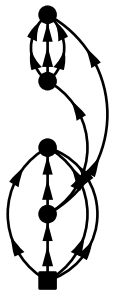
$\rightarrow$ T13:

$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{44}$$

$$a_1 = \epsilon^{k_5 k_6 k_7 k_8}$$
$$a_2 = \epsilon^{k_9}_{k_1 k_2 k_3}$$
$$a_3 = \epsilon^{k_{10}}_{k_5 k_6 k_9}$$
$$a_4 = \epsilon_{k_4 k_7 k_8 k_{10}}$$

Diagram 16:

$$\mathrm{PO4.16} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_2k_3k_4}\Omega^{31}_{k_8k_9k_{10}k_6}\Omega^{04}_{k_8k_9k_{10}k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_$$
$$= \frac{(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_2k_3k_4}\Omega^{31}_{k_8k_9k_{10}k_6}\Omega^{04}_{k_8k_9k_{10}k_7}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_6k_7}\ \epsilon_{k_7k_8k_9k_{10}}} \tag{45}$$



$\rightarrow$ T5:

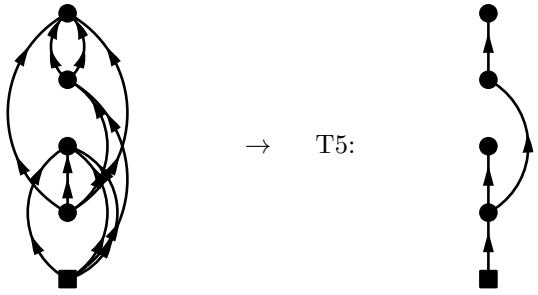
$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{46}$$

$$a_1 = \epsilon^{k_5 k_6 k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2 k_3 k_4 k_5}$$
$$a_3 = \epsilon^{k_8 k_9 k_{10}}_{k_6}$$
$$a_4 = \epsilon_{k_7 k_8 k_9 k_{10}}$$

Diagram 17:

$$\mathrm{PO4.17} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{22}_{k_9k_{10}k_6k_4}\Omega^{04}_{k_9k_{10}k_7k_8}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta$$

$$= \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{22}_{k_9k_{10}k_6k_4}\Omega^{04}_{k_9k_{10}k_7k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_4k_6k_7k_8}\ \epsilon_{k_7k_8k_9k_{10}}} \tag{47}$$



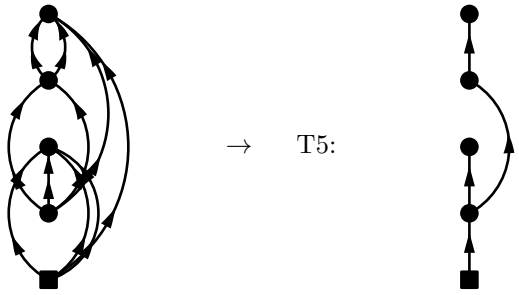
$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{48}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_2k_3k_5}$$
$$a_3 = \epsilon^{k_9k_{10}}_{k_4k_6}$$
$$a_4 = \epsilon_{k_7k_8k_9k_{10}}$$

Diagram 18:

$$\mathrm{PO4.18} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{22}_{k_9k_{10}k_6k_7}\Omega^{04}_{k_9k_{10}k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta$$

$$= \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{22}_{k_9k_{10}k_6k_7}\Omega^{04}_{k_9k_{10}k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_6k_7k_4k_8}\ \epsilon_{k_4k_8k_9k_{10}}} \tag{49}$$



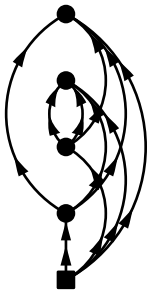
$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{50}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_2k_3k_5}$$
$$a_3 = \epsilon^{k_9k_{10}}_{k_6k_7}$$
$$a_4 = \epsilon_{k_4k_8k_9k_{10}}$$

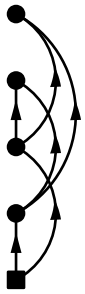
Diagram 19:

$$\mathrm{PO4.19} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{31}_{k_8k_9k_{10}k_2}\Omega^{04}_{k_8k_9k_5k_3}\Omega^{04}_{k_{10}k_6k_7k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta($$

$$= \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{31}_{k_8k_9k_{10}k_2}\Omega^{04}_{k_8k_9k_5k_3}\Omega^{04}_{k_{10}k_6k_7k_4}\left[\frac{1}{\epsilon_{k_1k_3k_8k_9k_4k_{10}}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_8k_9}\ \epsilon_{k_4k_6k_7k_{10}}} + \frac{}{\epsilon_{k_1k_2k} \tag{51}$$



$\rightarrow$ T10:

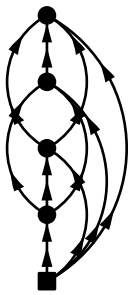


$$\mathrm{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{52}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8k_9k_{10}}_{k_2} \\ a_3 &= \epsilon_{k_3k_5k_8k_9} \\ a_4 &= \epsilon_{k_4k_6k_7k_{10}} \end{aligned}$$

Diagram 20:

$$\begin{aligned} \mathrm{PO4.20} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_5k_2}\Omega^{13}_{k_{10}k_6k_7k_3}\Omega^{04}_{k_{10}k_8k_9k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4 \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_5k_2}\Omega^{13}_{k_{10}k_6k_7k_3}\Omega^{04}_{k_{10}k_8k_9k_4}\left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_4k_{10}}\ \epsilon_{k_2k_5k_3k_6k_7k_4}\ \epsilon_{k_4k_8k_9k_{10}}} + \frac{}{\epsilon_{k_1k_2k_3k}}\right. \end{aligned} \tag{53}$$



$\rightarrow$ T11:

$$\mathrm{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{54}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8k_9}_{k_2k_5} \\ a_3 &= \epsilon^{k_{10}}_{k_3k_6k_7} \\ a_4 &= \epsilon_{k_4k_8k_9k_{10}} \end{aligned}$$

Diagram 21:

$$\begin{aligned} \mathrm{PO4.21} &= \lim_{\tau\to\infty} -(-1)^4 \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_5k_2}\Omega^{13}_{k_{10}k_8k_6k_3}\Omega^{04}_{k_{10}k_9k_7k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\\ &= -(-1)^4 \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_5k_2}\Omega^{13}_{k_{10}k_8k_6k_3}\Omega^{04}_{k_{10}k_9k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_3k_6k_4k_7}\ \epsilon_{k_3k_6k_8k_4k_7k_9}\ \epsilon_{k_4k_7k_9k_{10}}} \end{aligned} \tag{55}$$

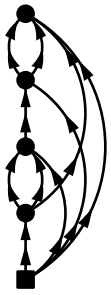
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{56}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8k_9}_{k_2k_5} \\ a_3 &= \epsilon^{k_{10}}_{k_3k_6k_8} \\ a_4 &= \epsilon_{k_4k_7k_9k_{10}} \end{aligned}$$

Diagram 22:

$$\begin{aligned} \mathrm{PO4.22} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_6k_2} \Omega^{22}_{k_9k_{10}k_8k_3} \Omega^{04}_{k_9k_{10}k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4 \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_6k_2} \Omega^{22}_{k_9k_{10}k_8k_3} \Omega^{04}_{k_9k_{10}k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_6k_3k_4k_7}\ \epsilon_{k_3k_8k_4k_7}\ \epsilon_{k_4k_7k_9k_{10}}} \end{aligned} \tag{57}$$



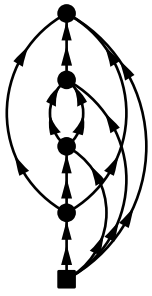
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{58}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_2k_5k_6} \\ a_3 &= \epsilon^{k_9k_{10}}_{k_3k_8} \\ a_4 &= \epsilon_{k_4k_7k_9k_{10}} \end{aligned}$$

Diagram 23:

$$\begin{aligned} \mathrm{PO4.23} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_2} \Omega^{13}_{k_{10}k_8k_9k_3} \Omega^{04}_{k_{10}k_6k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4 \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_2} \Omega^{13}_{k_{10}k_8k_9k_3} \Omega^{04}_{k_{10}k_6k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_3k_4k_6k_7}\ \epsilon_{k_3k_8k_9k_4k_6k_7}\ \epsilon_{k_4k_6k_7k_{10}}} \end{aligned} \tag{59}$$



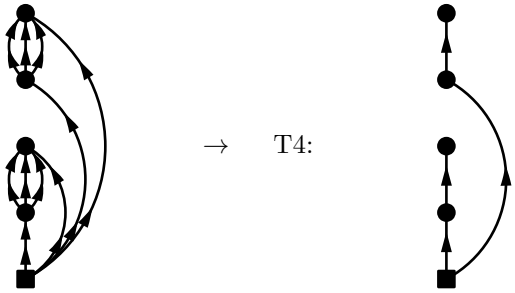
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{60}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8k_9}_{k_2k_5} \\ a_3 &= \epsilon^{k_{10}}_{k_3k_8k_9} \\ a_4 &= \epsilon_{k_4k_6k_7k_{10}} \end{aligned}$$

Diagram 24:

$$\begin{aligned} \mathrm{PO4.24} &= \lim_{\tau\to\infty} \frac{(-1)^4}{2(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{04}_{k_5k_6k_7k_2} \Omega^{31}_{k_8k_9k_{10}k_3} \Omega^{04}_{k_8k_9k_{10}k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k_6k_7}_{k_1}} e^{-} \\ &= \frac{(-1)^4}{2(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{04}_{k_5k_6k_7k_2} \Omega^{31}_{k_8k_9k_{10}k_3} \Omega^{04}_{k_8k_9k_{10}k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_5k_6k_7}\ \epsilon_{k_3k_4}\ \epsilon_{k_4k_8k_9k_{10}}} \end{aligned} \tag{61}$$



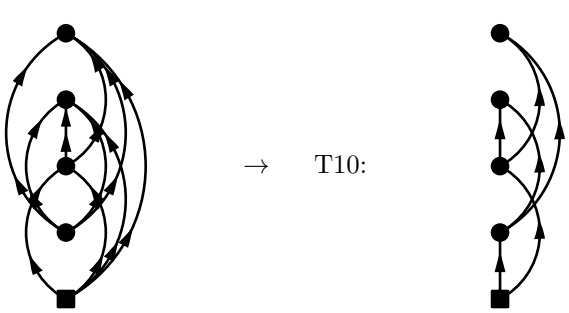
$\rightarrow$ T4:

$$\mathrm{T4} = \frac{1}{(a_1+a_2)a_2(a_3+a_4)a_4} \tag{62}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon_{k_2k_5k_6k_7} \\ a_3 &= \epsilon^{k_8k_9k_{10}}_{k_3} \\ a_4 &= \epsilon_{k_4k_8k_9k_{10}} \end{aligned}$$

Diagram 25:

$$\begin{aligned} \mathrm{PO4.25} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{22}_{k_9k_{10}k_1k_2} \Omega^{04}_{k_9k_5k_6k_3} \Omega^{04}_{k_{10}k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\\ &= \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{22}_{k_9k_{10}k_1k_2} \Omega^{04}_{k_9k_5k_6k_3} \Omega^{04}_{k_{10}k_7k_8k_4} \left[\frac{1}{\epsilon_{k_3k_9k_4k_{10}}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_6k_9}\ \epsilon_{k_4k_7k_8k_{10}}} + \frac{}{\epsilon_{k_1k_2k_3k_4}} \right. \end{aligned} \tag{63}$$



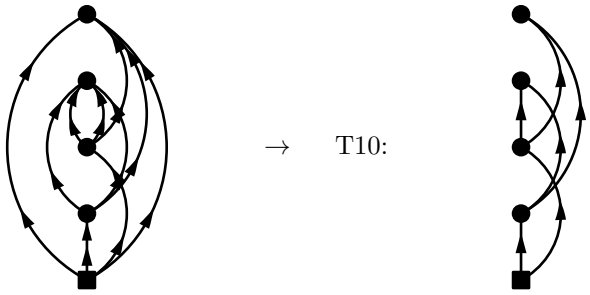
$\rightarrow$ T10:

$$\mathrm{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{64}$$

$$a_1 = \epsilon^{k_5 k_6 k_7 k_8}$$
$$a_2 = \epsilon^{k_9 k_{10}}_{k_1 k_2}$$
$$a_3 = \epsilon_{k_3 k_5 k_6 k_9}$$
$$a_4 = \epsilon_{k_4 k_7 k_8 k_{10}}$$

Diagram 26:

$$\mathrm{PO4.26} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{31}_{k_8k_9k_{10}k_2} \Omega^{04}_{k_8k_9k_5k_6} \Omega^{04}_{k_{10}k_7k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta($$
$$= \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{31}_{k_8k_9k_{10}k_2} \Omega^{04}_{k_8k_9k_5k_6} \Omega^{04}_{k_{10}k_7k_3k_4} \left[\frac{1}{\epsilon_{k_1k_8k_9k_3k_4k_{10}}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_8k_9}\ \epsilon_{k_3k_4k_7k_{10}}} + \frac{}{\epsilon_{k_1k_2k} \right. \tag{65}$$

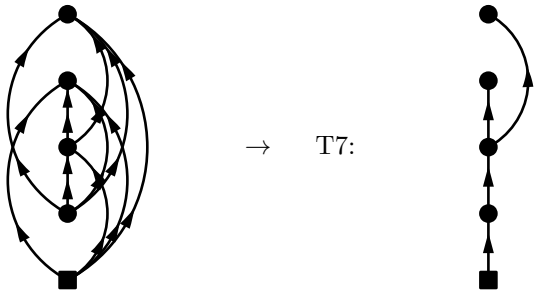


$$\mathrm{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{66}$$

$$a_1 = \epsilon^{k_5 k_6 k_7}_{k_1}$$
$$a_2 = \epsilon^{k_8 k_9 k_{10}}_{k_2}$$
$$a_3 = \epsilon_{k_5 k_6 k_8 k_9}$$
$$a_4 = \epsilon_{k_3 k_4 k_7 k_{10}}$$

Diagram 27:

$$\mathrm{PO4.27} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{22}_{k_9k_{10}k_5k_1} \Omega^{04}_{k_9k_6k_2k_3} \Omega^{04}_{k_{10}k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3$$
$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{22}_{k_9k_{10}k_5k_1} \Omega^{04}_{k_9k_6k_2k_3} \Omega^{04}_{k_{10}k_7k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_2k_3k_6k_4k_7k_8}\ \epsilon_{k_2k_3k_6k_9}\ \epsilon_{k_4k_7k_8k_{10}}} \tag{67}$$



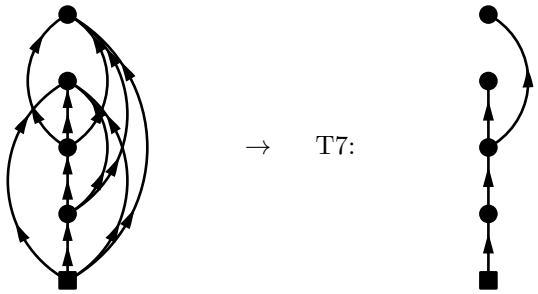
$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{68}$$

$$a_1 = \epsilon^{k_5 k_6 k_7 k_8}$$
$$a_2 = \epsilon^{k_9 k_{10}}_{k_1 k_5}$$
$$a_3 = \epsilon_{k_2 k_3 k_6 k_9}$$
$$a_4 = \epsilon_{k_4 k_7 k_8 k_{10}}$$

Diagram 28:

$$\text{PO4.28} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{31}_{k_8k_9k_{10}k_5} \Omega^{04}_{k_8k_6k_2k_3} \Omega^{04}_{k_9k_{10}k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{31}_{k_8k_9k_{10}k_5} \Omega^{04}_{k_8k_6k_2k_3} \Omega^{04}_{k_9k_{10}k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_2k_3k_6k_4k_7}\ \epsilon_{k_2k_3k_6k_8}\ \epsilon_{k_4k_7k_9k_{10}}} \tag{69}$$



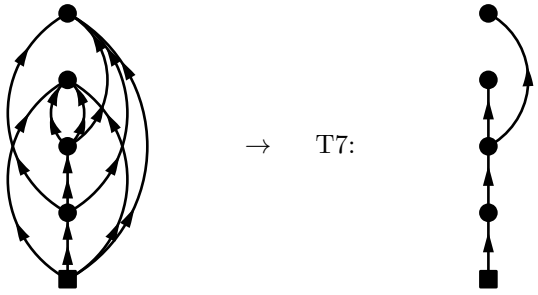
$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{70}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon^{k_8k_9k_{10}}_{k_5}$$
$$a_3 = \epsilon_{k_2k_3k_6k_8}$$
$$a_4 = \epsilon_{k_4k_7k_9k_{10}}$$

Diagram 29:

$$\text{PO4.29} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{31}_{k_8k_9k_{10}k_5} \Omega^{04}_{k_8k_9k_2k_3} \Omega^{04}_{k_{10}k_6k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{31}_{k_8k_9k_{10}k_5} \Omega^{04}_{k_8k_9k_2k_3} \Omega^{04}_{k_{10}k_6k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_2k_3k_4k_6k_7}\ \epsilon_{k_2k_3k_8k_9}\ \epsilon_{k_4k_6k_7k_{10}}} \tag{71}$$



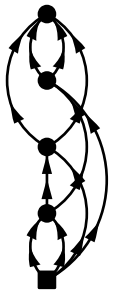
$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{72}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon^{k_8k_9k_{10}}_{k_5}$$
$$a_3 = \epsilon_{k_2k_3k_8k_9}$$
$$a_4 = \epsilon_{k_4k_6k_7k_{10}}$$

Diagram 30:

$$\text{PO4.30} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_3} \Omega^{22}_{k_9k_{10}k_6k_4} \Omega^{04}_{k_9k_{10}k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta($$

$$= \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_3} \Omega^{22}_{k_9k_{10}k_6k_4} \Omega^{04}_{k_9k_{10}k_7k_8} \left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_9k_{10}}\ \epsilon_{k_3k_5k_4k_6}\ \epsilon_{k_7k_8k_9k_{10}}} + \frac{}{\epsilon_{k_1k_2k_3k_4}} \right. \tag{73}$$



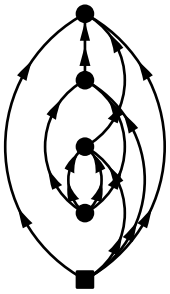
$\rightarrow$ T11:

$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{74}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_2 &= \epsilon^{k_7k_8}_{k_3k_5} \\ a_3 &= \epsilon^{k_9k_{10}}_{k_4k_6} \\ a_4 &= \epsilon_{k_7k_8k_9k_{10}} \end{aligned}$$

Diagram 31:

$$\begin{aligned} \text{PO4.31} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_6k_1}\Omega^{13}_{k_{10}k_7k_8k_2}\Omega^{04}_{k_{10}k_9k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\\ &= \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_6k_1}\Omega^{13}_{k_{10}k_7k_8k_2}\Omega^{04}_{k_{10}k_9k_3k_4}\left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_3k_4k_{10}}\ \epsilon_{k_1k_5k_6k_2k_7k_8k_3k_4}\ \epsilon_{k_3k_4k_9k_{10}}} - \right. \end{aligned} \tag{75}$$



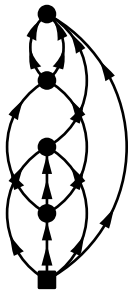
$\rightarrow$ T11:

$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{76}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon^{k_9}_{k_1k_5k_6} \\ a_3 &= \epsilon^{k_{10}}_{k_2k_7k_8} \\ a_4 &= \epsilon_{k_3k_4k_9k_{10}} \end{aligned}$$

Diagram 32:

$$\begin{aligned} \text{PO4.32} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_2k_3}\Omega^{22}_{k_9k_{10}k_6k_7}\Omega^{04}_{k_9k_{10}k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_ \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_2k_3}\Omega^{22}_{k_9k_{10}k_6k_7}\Omega^{04}_{k_9k_{10}k_8k_4}\left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_4k_9k_{10}}\ \epsilon_{k_2k_3k_5k_6k_7k_4}\ \epsilon_{k_4k_8k_9k_{10}}} + \frac{}{\epsilon_{k_1k}}\right. \end{aligned} \tag{77}$$



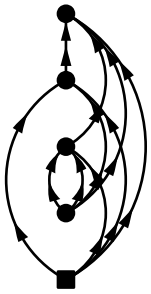
$\rightarrow$ T11:

$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{78}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_2k_3k_5} \\ a_3 &= \epsilon^{k_9k_{10}}_{k_6k_7} \\ a_4 &= \epsilon_{k_4k_8k_9k_{10}} \end{aligned}$$

Diagram 33:

$$\begin{aligned} \text{PO4.33} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_6k_1}\Omega^{13}_{k_{10}k_7k_2k_3}\Omega^{04}_{k_{10}k_9k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_6k_1}\Omega^{13}_{k_{10}k_7k_2k_3}\Omega^{04}_{k_{10}k_9k_8k_4}\left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_4k_8k_{10}}\ \epsilon_{k_1k_5k_6k_2k_3k_7k_4k_8}\ \epsilon_{k_4k_8k_9k_{10}}} - \right. \end{aligned} \tag{79}$$



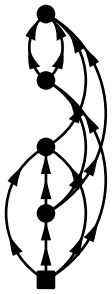
$\rightarrow$ T11:

$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{80}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon^{k_9}_{k_1k_5k_6} \\ a_3 &= \epsilon^{k_{10}}_{k_2k_3k_7} \\ a_4 &= \epsilon_{k_4k_8k_9k_{10}} \end{aligned}$$

Diagram 34:

$$\begin{aligned} \text{PO4.34} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_2k_3}\Omega^{22}_{k_9k_{10}k_6k_4}\Omega^{04}_{k_9k_{10}k_8k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_2k_3}\Omega^{22}_{k_9k_{10}k_6k_4}\Omega^{04}_{k_9k_{10}k_8k_7}\left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_7k_9k_{10}}\ \epsilon_{k_2k_3k_5k_4k_6k_7}\ \epsilon_{k_7k_8k_9k_{10}}} + \right. \end{aligned} \tag{81}$$



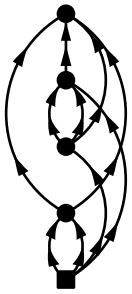
$\rightarrow$ T11:

$$\mathrm{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{82}$$

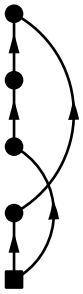
$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_2k_3k_5} \\ a_3 &= \epsilon^{k_9k_{10}}_{k_4k_6} \\ a_4 &= \epsilon_{k_7k_8k_9k_{10}} \end{aligned}$$

Diagram 35:

$$\begin{aligned} \mathrm{PO4.35} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{31}_{k_7k_8k_9k_3}\Omega^{13}_{k_{10}k_7k_8k_4}\Omega^{04}_{k_{10}k_9k_5k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\\ &= \frac{-(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{31}_{k_7k_8k_9k_3}\Omega^{13}_{k_{10}k_7k_8k_4}\Omega^{04}_{k_{10}k_9k_5k_6}\left[\frac{1}{\epsilon_{k_1k_2k_9k_{10}}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_4k_7k_8k_9}\ \epsilon_{k_5k_6k_9k_{10}}} + \frac{}{\epsilon_{k_1k_2k}\right. \end{aligned} \tag{83}$$



$\rightarrow$ T12:

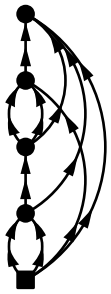


$$\mathrm{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{84}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_2 &= \epsilon^{k_7k_8k_9}_{k_3} \\ a_3 &= \epsilon^{k_{10}}_{k_4k_7k_8} \\ a_4 &= \epsilon_{k_5k_6k_9k_{10}} \end{aligned}$$

Diagram 36:

$$\begin{aligned} \mathrm{PO4.36} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{31}_{k_7k_8k_9k_5}\Omega^{13}_{k_{10}k_7k_8k_3}\Omega^{04}_{k_{10}k_9k_6k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4 \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{31}_{k_7k_8k_9k_5}\Omega^{13}_{k_{10}k_7k_8k_3}\Omega^{04}_{k_{10}k_9k_6k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_3k_7k_8k_4k_6k_9}\ \epsilon_{k_4k_6k_9k_{10}}} \end{aligned} \tag{85}$$



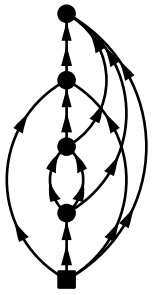
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{86}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_2 &= \epsilon^{k_7k_8k_9}_{k_5} \\ a_3 &= \epsilon^{k_{10}}_{k_3k_7k_8} \\ a_4 &= \epsilon_{k_4k_6k_9k_{10}} \end{aligned}$$

Diagram 37:

$$\begin{aligned} \mathrm{PO4.37} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{13}_{k_{10}k_8k_2k_3} \Omega^{04}_{k_{10}k_9k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4 \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{13}_{k_{10}k_8k_2k_3} \Omega^{04}_{k_{10}k_9k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_2k_3k_4k_7}\ \epsilon_{k_2k_3k_8k_4k_7k_9}\ \epsilon_{k_4k_7k_9k_{10}}} \end{aligned} \tag{87}$$



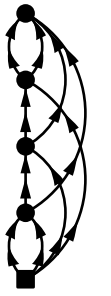
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{88}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8k_9}_{k_5k_6} \\ a_3 &= \epsilon^{k_{10}}_{k_2k_3k_8} \\ a_4 &= \epsilon_{k_4k_7k_9k_{10}} \end{aligned}$$

Diagram 38:

$$\begin{aligned} \mathrm{PO4.38} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_3} \Omega^{22}_{k_9k_{10}k_7k_4} \Omega^{04}_{k_9k_{10}k_8k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_3} \Omega^{22}_{k_9k_{10}k_7k_4} \Omega^{04}_{k_9k_{10}k_8k_6}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_4k_6}\ \epsilon_{k_4k_7k_6k_8}\ \epsilon_{k_6k_8k_9k_{10}}} \end{aligned} \tag{89}$$



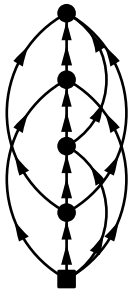
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{90}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7 k_8}_{k_3 k_5} \\ a_3 &= \epsilon^{k_9 k_{10}}_{k_4 k_7} \\ a_4 &= \epsilon_{k_6 k_8 k_9 k_{10}} \end{aligned}$$

Diagram 39:

$$\begin{aligned} \mathrm{PO4.39} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_2} \Omega^{13}_{k_{10}k_8k_3k_4} \Omega^{04}_{k_{10}k_9k_6k_7} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4 \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_2} \Omega^{13}_{k_{10}k_8k_3k_4} \Omega^{04}_{k_{10}k_9k_6k_7}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_3k_4k_6k_7}\ \epsilon_{k_3k_4k_8k_6k_7k_9}\ \epsilon_{k_6k_7k_9k_{10}}} \end{aligned} \tag{91}$$



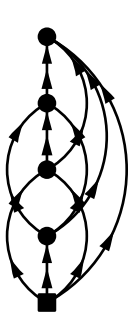
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{92}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\ a_2 &= \epsilon^{k_8 k_9}_{k_2 k_5} \\ a_3 &= \epsilon^{k_{10}}_{k_3 k_4 k_8} \\ a_4 &= \epsilon_{k_6 k_7 k_9 k_{10}} \end{aligned}$$

Diagram 40:

$$\begin{aligned} \mathrm{PO4.40} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_2k_3} \Omega^{13}_{k_{10}k_8k_5k_6} \Omega^{04}_{k_{10}k_9k_7k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4 \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_2k_3} \Omega^{13}_{k_{10}k_8k_5k_6} \Omega^{04}_{k_{10}k_9k_7k_4} \left[\frac{1}{\epsilon_{k_1k_8k_4k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_8k_4k_7k_9}\ \epsilon_{k_4k_7k_9k_{10}}} + \frac{}{\epsilon_{k_1k_2k_3k_4}} \right. \end{aligned} \tag{93}$$



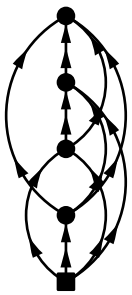
$\rightarrow$ T13:

$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{94}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\
a_2 &= \epsilon^{k_8k_9}_{k_2k_3} \\
a_3 &= \epsilon^{k_{10}}_{k_5k_6k_8} \\
a_4 &= \epsilon_{k_4k_7k_9k_{10}}
\end{aligned}
$$

Diagram 41:

$$
\begin{aligned}
\mathrm{PO4.41} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_2k_3} \Omega^{13}_{k_{10}k_8k_5k_4} \Omega^{04}_{k_{10}k_9k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4 \\
&= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_2k_3} \Omega^{13}_{k_{10}k_8k_5k_4} \Omega^{04}_{k_{10}k_9k_6k_7} \left[\frac{1}{\epsilon_{k_1k_4k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_5k_8k_6k_7k_9}\ \epsilon_{k_6k_7k_9k_{10}}} + \frac{}{\epsilon_{k_1k_2k_3k_4}} \right.
\end{aligned}
\tag{95}
$$



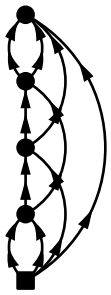
$\rightarrow$ T13:

$$
\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{96}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\
a_2 &= \epsilon^{k_8k_9}_{k_2k_3} \\
a_3 &= \epsilon^{k_{10}}_{k_4k_5k_8} \\
a_4 &= \epsilon_{k_6k_7k_9k_{10}}
\end{aligned}
$$

Diagram 42:

$$
\begin{aligned}
\mathrm{PO4.42} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_3} \Omega^{22}_{k_9k_{10}k_7k_6} \Omega^{04}_{k_9k_{10}k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4 \\
&= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_3} \Omega^{22}_{k_9k_{10}k_7k_6} \Omega^{04}_{k_9k_{10}k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_6k_4}\ \epsilon_{k_6k_7k_4k_8}\ \epsilon_{k_4k_8k_9k_{10}}}
\end{aligned}
\tag{97}
$$



$\rightarrow$ T6:

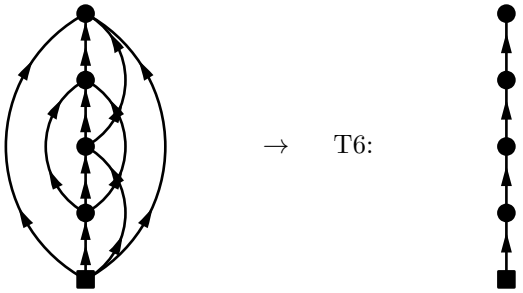
$$
\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{98}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\
a_2 &= \epsilon^{k_7k_8}_{k_3k_5} \\
a_3 &= \epsilon^{k_9k_{10}}_{k_6k_7} \\
a_4 &= \epsilon_{k_4k_8k_9k_{10}}
\end{aligned}
$$

Diagram 43:

$$\text{PO4.43} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_2} \Omega^{13}_{k_{10}k_8k_6k_7} \Omega^{04}_{k_{10}k_9k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_2} \Omega^{13}_{k_{10}k_8k_6k_7} \Omega^{04}_{k_{10}k_9k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_6k_7k_3k_4}\ \epsilon_{k_6k_7k_8k_3k_4k_9}\ \epsilon_{k_3k_4k_9k_{10}}} \tag{99}$$



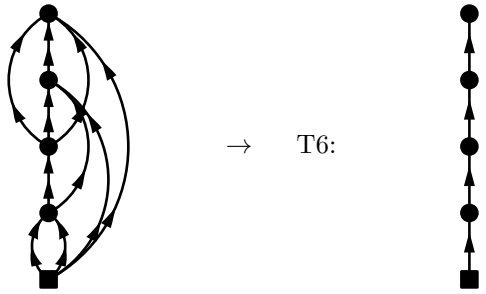
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{100}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon^{k_8k_9}_{k_2k_5}$$
$$a_3 = \epsilon^{k_{10}}_{k_6k_7k_8}$$
$$a_4 = \epsilon_{k_3k_4k_9k_{10}}$$

Diagram 44:

$$\text{PO4.44} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{13}_{k_{10}k_7k_6k_3} \Omega^{04}_{k_{10}k_8k_9k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{13}_{k_{10}k_7k_6k_3} \Omega^{04}_{k_{10}k_8k_9k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_3k_6k_4}\ \epsilon_{k_3k_6k_7k_4k_8k_9}\ \epsilon_{k_4k_8k_9k_{10}}} \tag{101}$$



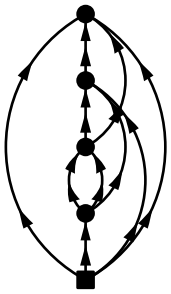
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{102}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7k_8k_9}_{k_5}$$
$$a_3 = \epsilon^{k_{10}}_{k_3k_6k_7}$$
$$a_4 = \epsilon_{k_4k_8k_9k_{10}}$$

Diagram 45:

$$\text{PO4.45} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{13}_{k_{10}k_8k_7k_2} \Omega^{04}_{k_{10}k_9k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{13}_{k_{10}k_8k_7k_2} \Omega^{04}_{k_{10}k_9k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_2k_7k_3k_4}\ \epsilon_{k_2k_7k_8k_3k_4k_9}\ \epsilon_{k_3k_4k_9k_{10}}} \tag{103}$$



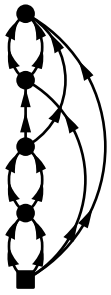
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{104}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8k_9}_{k_5k_6} \\ a_3 &= \epsilon^{k_{10}}_{k_2k_7k_8} \\ a_4 &= \epsilon_{k_3k_4k_9k_{10}} \end{aligned}$$

Diagram 46:

$$\begin{aligned} \mathrm{PO4.46} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{22}_{k_9k_{10}k_7k_3}\Omega^{04}_{k_9k_{10}k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\\ &= \frac{-(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{22}_{k_9k_{10}k_7k_3}\Omega^{04}_{k_9k_{10}k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_3k_4}\ \epsilon_{k_3k_7k_4k_8}\ \epsilon_{k_4k_8k_9k_{10}}} \end{aligned} \tag{105}$$



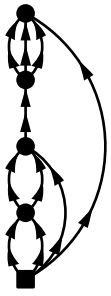
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{106}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_2 &= \epsilon^{k_7k_8}_{k_5k_6} \\ a_3 &= \epsilon^{k_9k_{10}}_{k_3k_7} \\ a_4 &= \epsilon_{k_4k_8k_9k_{10}} \end{aligned}$$

Diagram 47:

$$\begin{aligned} \mathrm{PO4.47} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{13}_{k_7k_5k_6k_3}\Omega^{31}_{k_8k_9k_{10}k_7}\Omega^{04}_{k_8k_9k_{10}k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e \\ &= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{13}_{k_7k_5k_6k_3}\Omega^{31}_{k_8k_9k_{10}k_7}\Omega^{04}_{k_8k_9k_{10}k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_6k_4}\ \epsilon_{k_7k_4}\ \epsilon_{k_4k_8k_9k_{10}}} \end{aligned} \tag{107}$$



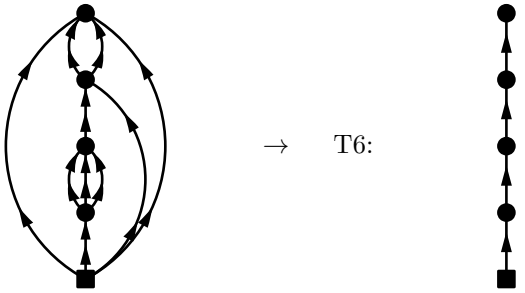
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{108}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7}_{k_3 k_5 k_6} \\ a_3 &= \epsilon^{k_8 k_9 k_{10}}_{k_7} \\ a_4 &= \epsilon_{k_4 k_8 k_9 k_{10}} \end{aligned}$$

Diagram 48:

$$\begin{aligned} \mathrm{PO4.48} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_6k_7} \Omega^{22}_{k_9k_{10}k_8k_2} \Omega^{04}_{k_9k_{10}k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e \\ &= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_6k_7} \Omega^{22}_{k_9k_{10}k_8k_2} \Omega^{04}_{k_9k_{10}k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_7k_2k_3k_4}\ \epsilon_{k_2k_8k_3k_4}\ \epsilon_{k_3k_4k_9k_{10}}} \end{aligned} \tag{109}$$

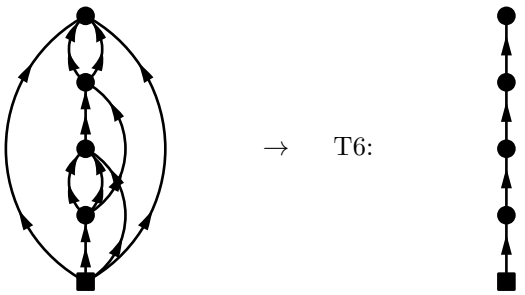


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{110}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_5 k_6 k_7} \\ a_3 &= \epsilon^{k_9 k_{10}}_{k_2 k_8} \\ a_4 &= \epsilon_{k_3 k_4 k_9 k_{10}} \end{aligned}$$

Diagram 49:

$$\begin{aligned} \mathrm{PO4.49} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_6k_2} \Omega^{22}_{k_9k_{10}k_8k_7} \Omega^{04}_{k_9k_{10}k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\\ &= \frac{-(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_6k_2} \Omega^{22}_{k_9k_{10}k_8k_7} \Omega^{04}_{k_9k_{10}k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_6k_7k_3k_4}\ \epsilon_{k_7k_8k_3k_4}\ \epsilon_{k_3k_4k_9k_{10}}} \end{aligned} \tag{111}$$

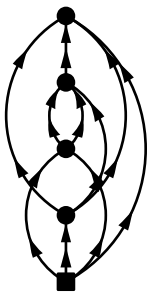


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{112}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\
a_2 &= \epsilon^{k_8}_{k_2k_5k_6} \\
a_3 &= \epsilon^{k_9k_{10}}_{k_7k_8} \\
a_4 &= \epsilon_{k_3k_4k_9k_{10}}
\end{aligned}
$$

Diagram 50:

$$
\begin{aligned}
\mathrm{PO4.50} &= \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^3}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_2k_3}\Omega^{13}_{k_{10}k_8k_9k_5}\Omega^{04}_{k_{10}k_6k_7k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4 \\
&= \frac{(-1)^4}{(2!)^3}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_2k_3}\Omega^{13}_{k_{10}k_8k_9k_5}\Omega^{04}_{k_{10}k_6k_7k_4}\left[\frac{1}{\epsilon_{k_1k_8k_9k_4}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_8k_9k_4k_6k_7}\ \epsilon_{k_4k_6k_7k_{10}}}+\frac{}{\epsilon_{k_1k_2k_3k_4}}\right.
\end{aligned}
\tag{113}
$$



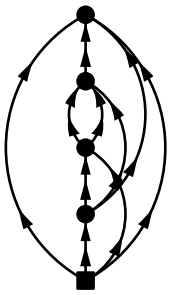
$\rightarrow$ T13:

$$
\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4}+\frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{114}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\
a_2 &= \epsilon^{k_8k_9}_{k_2k_3} \\
a_3 &= \epsilon^{k_{10}}_{k_5k_8k_9} \\
a_4 &= \epsilon_{k_4k_6k_7k_{10}}
\end{aligned}
$$

Diagram 51:

$$
\begin{aligned}
\mathrm{PO4.51} &= \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^2}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_5k_2}\Omega^{13}_{k_{10}k_8k_9k_6}\Omega^{04}_{k_{10}k_7k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3 \\
&= \frac{(-1)^4}{(2!)^2}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_5k_2}\Omega^{13}_{k_{10}k_8k_9k_6}\Omega^{04}_{k_{10}k_7k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_6k_3k_4k_7}\ \epsilon_{k_6k_8k_9k_3k_4k_7}\ \epsilon_{k_3k_4k_7k_{10}}}
\end{aligned}
\tag{115}
$$



$\rightarrow$ T6:

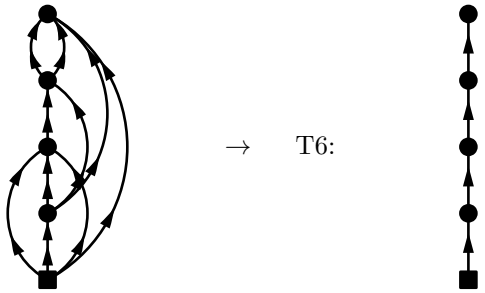
$$
\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{116}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\
a_2 &= \epsilon^{k_8k_9}_{k_2k_5} \\
a_3 &= \epsilon^{k_{10}}_{k_6k_8k_9} \\
a_4 &= \epsilon_{k_3k_4k_7k_{10}}
\end{aligned}
$$

Diagram 52:

$$\mathrm{PO4.52} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_2k_3} \Omega^{22}_{k_9k_{10}k_8k_6} \Omega^{04}_{k_9k_{10}k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_2k_3} \Omega^{22}_{k_9k_{10}k_8k_6} \Omega^{04}_{k_9k_{10}k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_6k_4k_7}\ \epsilon_{k_6k_8k_4k_7}\ \epsilon_{k_4k_7k_9k_{10}}} \tag{117}$$



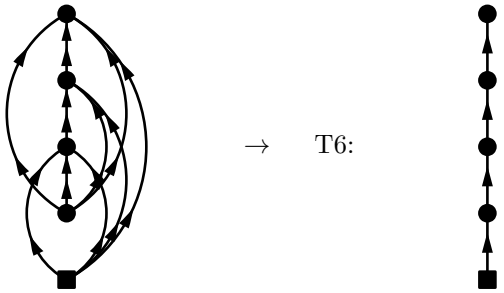
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{118}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon^{k_8}_{k_2k_3k_5}$$
$$a_3 = \epsilon^{k_9k_{10}}_{k_6k_8}$$
$$a_4 = \epsilon_{k_4k_7k_9k_{10}}$$

Diagram 53:

$$\mathrm{PO4.53} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_5k_1k_2} \Omega^{13}_{k_{10}k_9k_6k_3} \Omega^{04}_{k_{10}k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_5k_1k_2} \Omega^{13}_{k_{10}k_9k_6k_3} \Omega^{04}_{k_{10}k_7k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_3k_6k_4k_7k_8}\ \epsilon_{k_3k_6k_9k_4k_7k_8}\ \epsilon_{k_4k_7k_8k_{10}}} \tag{119}$$



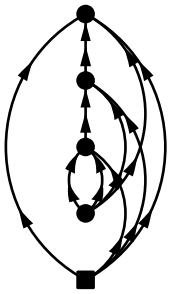
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{120}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon^{k_9}_{k_1k_2k_5}$$
$$a_3 = \epsilon^{k_{10}}_{k_3k_6k_9}$$
$$a_4 = \epsilon_{k_4k_7k_8k_{10}}$$

Diagram 54:

$$\mathrm{PO4.54} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_5k_6k_1} \Omega^{13}_{k_{10}k_9k_7k_2} \Omega^{04}_{k_{10}k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta($$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_5k_6k_1} \Omega^{13}_{k_{10}k_9k_7k_2} \Omega^{04}_{k_{10}k_8k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_2k_7k_3k_4k_8}\ \epsilon_{k_2k_7k_9k_3k_4k_8}\ \epsilon_{k_3k_4k_8k_{10}}} \tag{121}$$



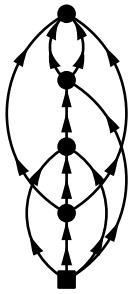
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{122}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon^{k_9}_{k_1k_5k_6} \\ a_3 &= \epsilon^{k_{10}}_{k_2k_7k_9} \\ a_4 &= \epsilon_{k_3k_4k_8k_{10}} \end{aligned}$$

Diagram 55:

$$\begin{aligned} \mathrm{PO4.55} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_2k_3} \Omega^{22}_{k_9k_{10}k_8k_4} \Omega^{04}_{k_9k_{10}k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4 \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_2k_3} \Omega^{22}_{k_9k_{10}k_8k_4} \Omega^{04}_{k_9k_{10}k_6k_7}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_4k_6k_7}\ \epsilon_{k_4k_8k_6k_7}\ \epsilon_{k_6k_7k_9k_{10}}} \end{aligned} \tag{123}$$



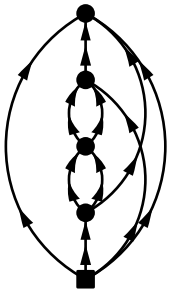
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{124}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_2k_3k_5} \\ a_3 &= \epsilon^{k_9k_{10}}_{k_4k_8} \\ a_4 &= \epsilon_{k_6k_7k_9k_{10}} \end{aligned}$$

Diagram 56:

$$\begin{aligned} \mathrm{PO4.56} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{13}_{k_{10}k_8k_9k_2} \Omega^{04}_{k_{10}k_7k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\\ &= \frac{-(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{13}_{k_{10}k_8k_9k_2} \Omega^{04}_{k_{10}k_7k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_2k_3k_4k_7}\ \epsilon_{k_2k_8k_9k_3k_4k_7}\ \epsilon_{k_3k_4k_7k_{10}}} \end{aligned} \tag{125}$$



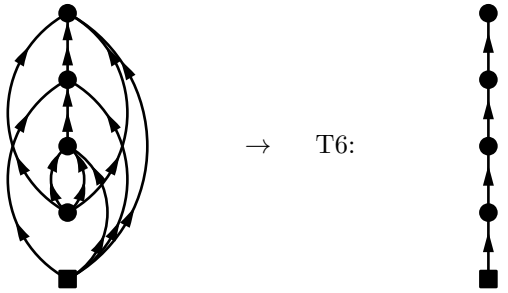
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{126}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8k_9}_{k_5k_6} \\ a_3 &= \epsilon^{k_{10}}_{k_2k_8k_9} \\ a_4 &= \epsilon_{k_3k_4k_7k_{10}} \end{aligned}$$

Diagram 57:

$$\begin{aligned} \mathrm{PO4.57} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_5k_6k_1} \Omega^{13}_{k_{10}k_9k_2k_3} \Omega^{04}_{k_{10}k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4 \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_5k_6k_1} \Omega^{13}_{k_{10}k_9k_2k_3} \Omega^{04}_{k_{10}k_7k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_2k_3k_4k_7k_8}\ \epsilon_{k_2k_3k_9k_4k_7k_8}\ \epsilon_{k_4k_7k_8k_{10}}} \end{aligned} \tag{127}$$

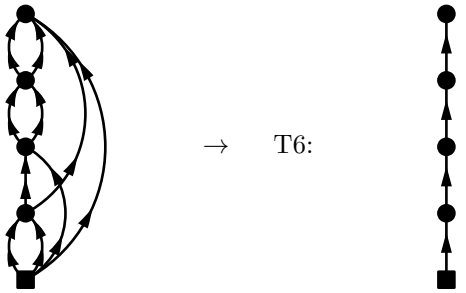


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{128}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon^{k_9}_{k_1k_5k_6} \\ a_3 &= \epsilon^{k_{10}}_{k_2k_3k_9} \\ a_4 &= \epsilon_{k_4k_7k_8k_{10}} \end{aligned}$$

Diagram 58:

$$\begin{aligned} \mathrm{PO4.58} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_3} \Omega^{22}_{k_9k_{10}k_7k_8} \Omega^{04}_{k_9k_{10}k_6k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\\ &= \frac{-(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_3} \Omega^{22}_{k_9k_{10}k_7k_8} \Omega^{04}_{k_9k_{10}k_6k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_4k_6}\ \epsilon_{k_7k_8k_4k_6}\ \epsilon_{k_4k_6k_9k_{10}}} \end{aligned} \tag{129}$$

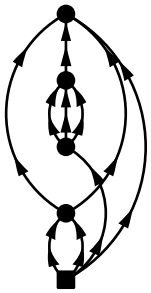


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{130}$$

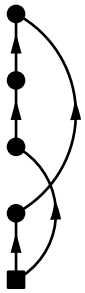
$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6}_{k_1k_2}\\
a_2 &= \epsilon^{k_7k_8}_{k_3k_5}\\
a_3 &= \epsilon^{k_9k_{10}}_{k_7k_8}\\
a_4 &= \epsilon_{k_4k_6k_9k_{10}}
\end{aligned}
$$

Diagram 59:

$$
\begin{aligned}
\mathrm{PO4.59} &= \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^2(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{31}_{k_7k_8k_9k_3}\Omega^{13}_{k_{10}k_7k_8k_9}\Omega^{04}_{k_{10}k_5k_6k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e\\
&= \frac{(-1)^4}{(2!)^2(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{31}_{k_7k_8k_9k_3}\Omega^{13}_{k_{10}k_7k_8k_9}\Omega^{04}_{k_{10}k_5k_6k_4}\left[\frac{1}{\epsilon_{k_1k_2k_4k_{10}}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_7k_8k_9k_4}\ \epsilon_{k_4k_5k_6k_{10}}}+\frac{}{\epsilon_{k_1k_2}}\right.
\end{aligned}
\tag{131}
$$



$\rightarrow$ T12:

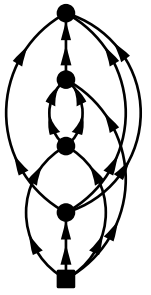


$$
\mathrm{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4}+\frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4}+\frac{1}{(a_1+a_2+a_3+a_4)(a_2}
\tag{132}
$$

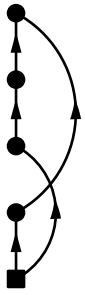
$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6}_{k_1k_2}\\
a_2 &= \epsilon^{k_7k_8k_9}_{k_3}\\
a_3 &= \epsilon^{k_{10}}_{k_7k_8k_9}\\
a_4 &= \epsilon_{k_4k_5k_6k_{10}}
\end{aligned}
$$

Diagram 60:

$$
\begin{aligned}
\mathrm{PO4.60} &= \lim_{\tau\to\infty}\frac{-(-1)^4}{(2!)^2(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_2k_3}\Omega^{13}_{k_{10}k_8k_9k_4}\Omega^{04}_{k_{10}k_5k_6k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e\\
&= \frac{-(-1)^4}{(2!)^2(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_2k_3}\Omega^{13}_{k_{10}k_8k_9k_4}\Omega^{04}_{k_{10}k_5k_6k_7}\left[\frac{1}{\epsilon_{k_1k_{10}}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_4k_8k_9}\ \epsilon_{k_5k_6k_7k_{10}}}+\frac{}{\epsilon_{k_1k_4k_8k_9}\ \epsilon_{k_1}}\right.
\end{aligned}
\tag{133}
$$



$\rightarrow$ T12:

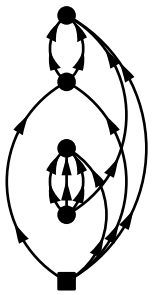


$$
\mathrm{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4}+\frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4}+\frac{1}{(a_1+a_2+a_3+a_4)(a_2}
\tag{134}
$$

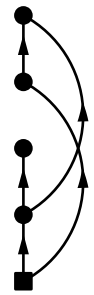
$$a_1 = \epsilon^{k_5 k_6 k_7}_{k_1}$$
$$a_2 = \epsilon^{k_8 k_9}_{k_2 k_3}$$
$$a_3 = \epsilon^{k_{10}}_{k_4 k_8 k_9}$$
$$a_4 = \epsilon_{k_5 k_6 k_7 k_{10}}$$

Diagram 61:

$$\mathrm{PO4.61} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_6k_7k_1}\Omega^{22}_{k_9k_{10}k_2k_3}\Omega^{04}_{k_9k_{10}k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e$$
$$= \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_6k_7k_1}\Omega^{22}_{k_9k_{10}k_2k_3}\Omega^{04}_{k_9k_{10}k_8k_4}\left[\frac{1}{\epsilon_{k_1k_4k_9k_{10}}\ \epsilon_{k_1k_5k_6k_7}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_8k_9k_{10}}} + \frac{}{\epsilon_{k_1k_2k_3k_4}}\right. \tag{135}$$



$\rightarrow$ T9:

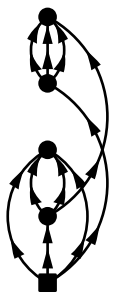


$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{136}$$

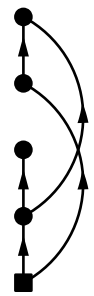
$$a_1 = \epsilon^{k_5 k_6 k_7 k_8}$$
$$a_2 = \epsilon_{k_1 k_5 k_6 k_7}$$
$$a_3 = \epsilon^{k_9 k_{10}}_{k_2 k_3}$$
$$a_4 = \epsilon_{k_4 k_8 k_9 k_{10}}$$

Diagram 62:

$$\mathrm{PO4.62} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_6k_2k_3}\Omega^{31}_{k_8k_9k_{10}k_4}\Omega^{04}_{k_8k_9k_{10}k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e$$
$$= \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_6k_2k_3}\Omega^{31}_{k_8k_9k_{10}k_4}\Omega^{04}_{k_8k_9k_{10}k_7}\left[\frac{1}{\epsilon_{k_1k_2k_3k_8k_9k_{10}}\ \epsilon_{k_2k_3k_5k_6}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_7k_8k_9k_{10}}} + \frac{}{\epsilon_{k_1k_2}}\right. \tag{137}$$



$\rightarrow$ T9:



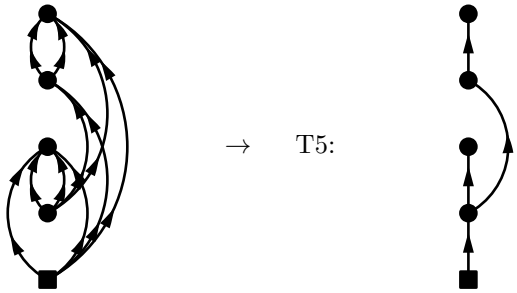
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{138}$$

$$a_1 = \epsilon^{k_5 k_6 k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2 k_3 k_5 k_6}$$
$$a_3 = \epsilon^{k_8 k_9 k_{10}}_{k_4}$$
$$a_4 = \epsilon_{k_7 k_8 k_9 k_{10}}$$

Diagram 63:

$$\mathrm{PO4.63} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{22}_{k_9k_{10}k_7k_3} \Omega^{04}_{k_9k_{10}k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta($$

$$= \frac{-(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{22}_{k_9k_{10}k_7k_3} \Omega^{04}_{k_9k_{10}k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_3k_7k_4k_8}\ \epsilon_{k_4k_8k_9k_{10}}} \tag{139}$$



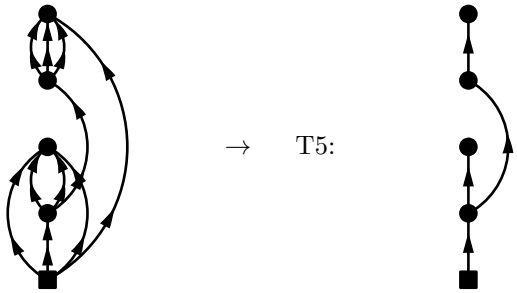
$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{140}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_2k_5k_6}$$
$$a_3 = \epsilon^{k_9k_{10}}_{k_3k_7}$$
$$a_4 = \epsilon_{k_4k_8k_9k_{10}}$$

Diagram 64:

$$\mathrm{PO4.64} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{04}_{k_5k_6k_2k_3} \Omega^{31}_{k_8k_9k_{10}k_7} \Omega^{04}_{k_8k_9k_{10}k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e$$

$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{04}_{k_5k_6k_2k_3} \Omega^{31}_{k_8k_9k_{10}k_7} \Omega^{04}_{k_8k_9k_{10}k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_6}\ \epsilon_{k_7k_4}\ \epsilon_{k_4k_8k_9k_{10}}} \tag{141}$$



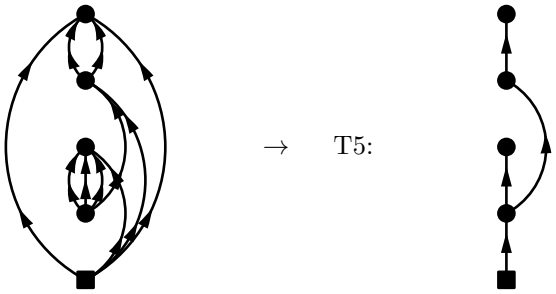
$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{142}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3k_5k_6}$$
$$a_3 = \epsilon^{k_8k_9k_{10}}_{k_7}$$
$$a_4 = \epsilon_{k_4k_8k_9k_{10}}$$

Diagram 65:

$$\mathrm{PO4.65} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_7k_1} \Omega^{22}_{k_9k_{10}k_8k_2} \Omega^{04}_{k_9k_{10}k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e$$

$$= \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_7k_1} \Omega^{22}_{k_9k_{10}k_8k_2} \Omega^{04}_{k_9k_{10}k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_7}\ \epsilon_{k_2k_8k_3k_4}\ \epsilon_{k_3k_4k_9k_{10}}} \tag{143}$$

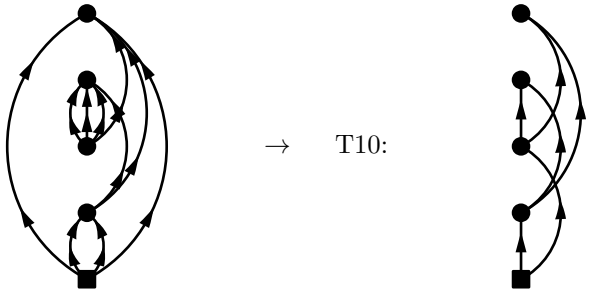


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{144}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon_{k_1k_5k_6k_7} \\ a_3 &= \epsilon^{k_9k_{10}}_{k_2k_8} \\ a_4 &= \epsilon_{k_3k_4k_9k_{10}} \end{aligned}$$

Diagram 66:

$$\begin{aligned} \text{PO4.66} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{40}_{k_7k_8k_9k_{10}}\Omega^{04}_{k_7k_8k_9k_5}\Omega^{04}_{k_{10}k_6k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta \\ &= \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{40}_{k_7k_8k_9k_{10}}\Omega^{04}_{k_7k_8k_9k_5}\Omega^{04}_{k_{10}k_6k_3k_4}\left[\frac{1}{\epsilon_{k_1k_2k_7k_8k_9k_3k_4k_{10}}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_7k_8k_9}\ \epsilon_{k_3k_4k_6k_{10}}} + \frac{}{\epsilon_{}}\right. \end{aligned} \tag{145}$$

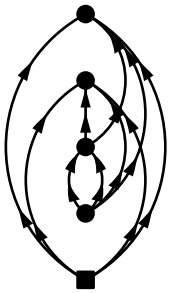


$$\text{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{146}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_2 &= \epsilon^{k_7k_8k_9k_{10}} \\ a_3 &= \epsilon_{k_5k_7k_8k_9} \\ a_4 &= \epsilon_{k_3k_4k_6k_{10}} \end{aligned}$$

Diagram 67:

$$\begin{aligned} \text{PO4.67} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{22}_{k_9k_{10}k_5k_6}\Omega^{04}_{k_9k_7k_1k_2}\Omega^{04}_{k_{10}k_8k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\\ &= \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{22}_{k_9k_{10}k_5k_6}\Omega^{04}_{k_9k_7k_1k_2}\Omega^{04}_{k_{10}k_8k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_1k_2k_7k_3k_4k_8}\ \epsilon_{k_1k_2k_7k_9}\ \epsilon_{k_3k_4k_8k_{10}}} \end{aligned} \tag{147}$$



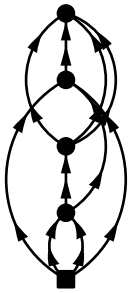
$\rightarrow$ T7:

$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{148}$$

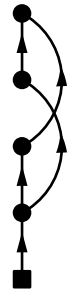
$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon^{k_9k_{10}}_{k_5k_6} \\ a_3 &= \epsilon_{k_1k_2k_7k_9} \\ a_4 &= \epsilon_{k_3k_4k_8k_{10}} \end{aligned}$$

Diagram 68:

$$\begin{aligned} \mathrm{PO4.68} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{31}_{k_7k_8k_9k_5}\Omega^{13}_{k_{10}k_6k_3k_4}\Omega^{04}_{k_{10}k_7k_8k_9}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta \\ &= \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{31}_{k_7k_8k_9k_5}\Omega^{13}_{k_{10}k_6k_3k_4}\Omega^{04}_{k_{10}k_7k_8k_9}\left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_{10}}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_7k_8k_9k_{10}}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5}}\right. \end{aligned} \tag{149}$$



$\rightarrow$ T11:

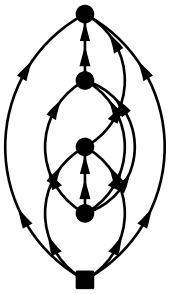


$$\mathrm{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{150}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_2 &= \epsilon^{k_7k_8k_9}_{k_5} \\ a_3 &= \epsilon^{k_{10}}_{k_3k_4k_6} \\ a_4 &= \epsilon_{k_7k_8k_9k_{10}} \end{aligned}$$

Diagram 69:

$$\begin{aligned} \mathrm{PO4.69} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_1k_2}\Omega^{13}_{k_{10}k_6k_7k_8}\Omega^{04}_{k_{10}k_9k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta \\ &= \frac{-(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_1k_2}\Omega^{13}_{k_{10}k_6k_7k_8}\Omega^{04}_{k_{10}k_9k_3k_4}\left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_3k_4k_{10}}\ \epsilon_{k_1k_2k_5k_6k_7k_8k_3k_4}\ \epsilon_{k_3k_4k_9k_{10}}}\right. \end{aligned} \tag{151}$$



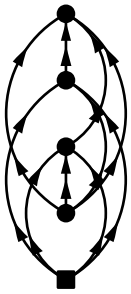
$\rightarrow$ T11: 

$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{152}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon^{k_9}_{k_1k_2k_5} \\ a_3 &= \epsilon^{k_{10}}_{k_6k_7k_8} \\ a_4 &= \epsilon_{k_3k_4k_9k_{10}} \end{aligned}$$

Diagram 70:

$$\begin{aligned} \text{PO4.70} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_1k_2}\Omega^{13}_{k_{10}k_6k_3k_4}\Omega^{04}_{k_{10}k_9k_7k_8}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\\ &= \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_1k_2}\Omega^{13}_{k_{10}k_6k_3k_4}\Omega^{04}_{k_{10}k_9k_7k_8}\left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_7k_8k_{10}}\ \epsilon_{k_1k_2k_5k_3k_4k_6k_7k_8}\ \epsilon_{k_7k_8k_9k_{10}}} - \right. \end{aligned} \tag{153}$$



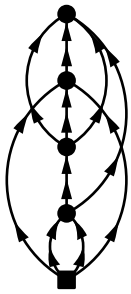
$\rightarrow$ T11: 

$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{154}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon^{k_9}_{k_1k_2k_5} \\ a_3 &= \epsilon^{k_{10}}_{k_3k_4k_6} \\ a_4 &= \epsilon_{k_7k_8k_9k_{10}} \end{aligned}$$

Diagram 71:

$$\begin{aligned} \text{PO4.71} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{31}_{k_7k_8k_9k_5}\Omega^{13}_{k_{10}k_7k_3k_4}\Omega^{04}_{k_{10}k_8k_9k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_ \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{31}_{k_7k_8k_9k_5}\Omega^{13}_{k_{10}k_7k_3k_4}\Omega^{04}_{k_{10}k_8k_9k_6}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_3k_4k_7k_6k_8k_9}\ \epsilon_{k_6k_8k_9k_{10}}} \end{aligned} \tag{155}$$



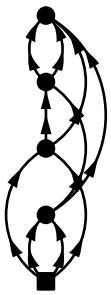
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{156}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_2 &= \epsilon^{k_7k_8k_9}_{k_5} \\ a_3 &= \epsilon^{k_{10}}_{k_3k_4k_7} \\ a_4 &= \epsilon_{k_6k_8k_9k_{10}} \end{aligned}$$

Diagram 72:

$$\begin{aligned} \mathrm{PO4.72} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{22}_{k_9k_{10}k_7k_5} \Omega^{04}_{k_9k_{10}k_8k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\\ &= \frac{-(-1)^4}{2(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{22}_{k_9k_{10}k_7k_5} \Omega^{04}_{k_9k_{10}k_8k_6} \left[\frac{1}{\epsilon_{k_1k_2k_7k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_7k_6k_8}\ \epsilon_{k_6k_8k_9k_{10}}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon} \right. \end{aligned} \tag{157}$$



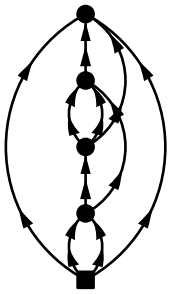
$\rightarrow$ T13:

$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{158}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_2 &= \epsilon^{k_7k_8}_{k_3k_4} \\ a_3 &= \epsilon^{k_9k_{10}}_{k_5k_7} \\ a_4 &= \epsilon_{k_6k_8k_9k_{10}} \end{aligned}$$

Diagram 73:

$$\begin{aligned} \mathrm{PO4.73} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{13}_{k_{10}k_7k_8k_6} \Omega^{04}_{k_{10}k_9k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\\ &= \frac{-(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{13}_{k_{10}k_7k_8k_6} \Omega^{04}_{k_{10}k_9k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_3k_4}\ \epsilon_{k_6k_7k_8k_3k_4k_9}\ \epsilon_{k_3k_4k_9k_{10}}} \end{aligned} \tag{159}$$



$\rightarrow$ T6:

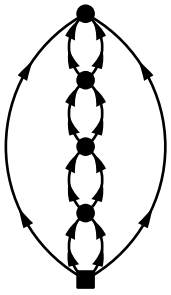
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{160}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_2 &= \epsilon^{k_7k_8k_9}_{k_5} \\ a_3 &= \epsilon^{k_{10}}_{k_6k_7k_8} \\ a_4 &= \epsilon_{k_3k_4k_9k_{10}} \end{aligned}$$

Diagram 74:

$$\mathrm{PO4.74} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^5} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{22}_{k_9k_{10}k_7k_8} \Omega^{04}_{k_9k_{10}k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau}$$

$$= \frac{(-1)^4}{(2!)^5} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{22}_{k_9k_{10}k_7k_8} \Omega^{04}_{k_9k_{10}k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_3k_4}\ \epsilon_{k_7k_8k_3k_4}\ \epsilon_{k_3k_4k_9k_{10}}} \tag{161}$$



$\rightarrow$ T6:

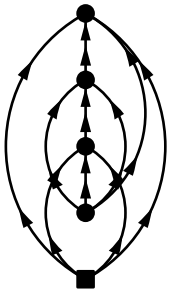
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{162}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_2 &= \epsilon^{k_7k_8}_{k_5k_6} \\ a_3 &= \epsilon^{k_9k_{10}}_{k_7k_8} \\ a_4 &= \epsilon_{k_3k_4k_9k_{10}} \end{aligned}$$

Diagram 75:

$$\mathrm{PO4.75} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_5k_1k_2} \Omega^{13}_{k_{10}k_9k_6k_7} \Omega^{04}_{k_{10}k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_5k_1k_2} \Omega^{13}_{k_{10}k_9k_6k_7} \Omega^{04}_{k_{10}k_8k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_6k_7k_3k_4k_8}\ \epsilon_{k_6k_7k_9k_3k_4k_8}\ \epsilon_{k_3k_4k_8k_{10}}} \tag{163}$$



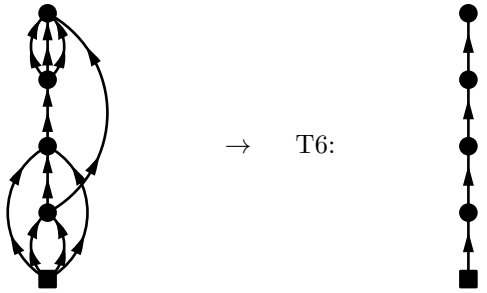
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{164}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon^{k_9}_{k_1k_2k_5} \\ a_3 &= \epsilon^{k_{10}}_{k_6k_7k_9} \\ a_4 &= \epsilon_{k_3k_4k_8k_{10}} \end{aligned}$$

Diagram 76:

$$\begin{aligned} \mathrm{PO4.76} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{13}_{k_7k_5k_3k_4}\Omega^{31}_{k_8k_9k_{10}k_7}\Omega^{04}_{k_8k_9k_{10}k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta \\ &= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{13}_{k_7k_5k_3k_4}\Omega^{31}_{k_8k_9k_{10}k_7}\Omega^{04}_{k_8k_9k_{10}k_6}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_4k_5k_6}\ \epsilon_{k_7k_6}\ \epsilon_{k_6k_8k_9k_{10}}} \end{aligned} \tag{165}$$

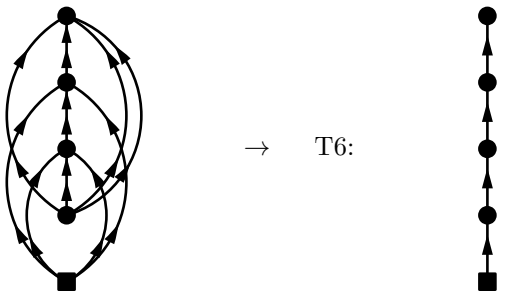


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{166}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_2 &= \epsilon^{k_7}_{k_3k_4k_5} \\ a_3 &= \epsilon^{k_8k_9k_{10}}_{k_7} \\ a_4 &= \epsilon_{k_6k_8k_9k_{10}} \end{aligned}$$

Diagram 77:

$$\begin{aligned} \mathrm{PO4.77} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_1k_2}\Omega^{13}_{k_{10}k_9k_3k_4}\Omega^{04}_{k_{10}k_6k_7k_8}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta \\ &= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_1k_2}\Omega^{13}_{k_{10}k_9k_3k_4}\Omega^{04}_{k_{10}k_6k_7k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_3k_4k_6k_7k_8}\ \epsilon_{k_3k_4k_9k_6k_7k_8}\ \epsilon_{k_6k_7k_8k_{10}}} \end{aligned} \tag{167}$$

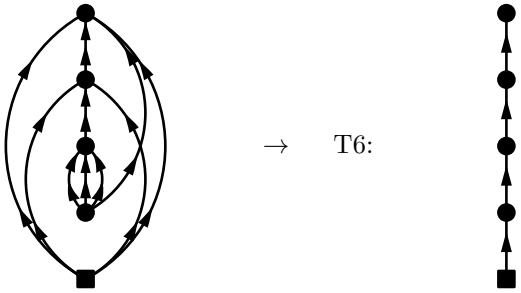


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{168}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6k_7k_8} \\
a_2 &= \epsilon^{k_9}_{k_1k_2k_5} \\
a_3 &= \epsilon^{k_{10}}_{k_3k_4k_9} \\
a_4 &= \epsilon_{k_6k_7k_8k_{10}}
\end{aligned}
$$

Diagram 78:

$$
\begin{aligned}
\mathrm{PO4.78} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_5k_6k_7} \Omega^{13}_{k_{10}k_9k_1k_2} \Omega^{04}_{k_{10}k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta \\
&= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_5k_6k_7} \Omega^{13}_{k_{10}k_9k_1k_2} \Omega^{04}_{k_{10}k_8k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_7k_1k_2k_3k_4k_8}\ \epsilon_{k_1k_2k_9k_3k_4k_8}\ \epsilon_{k_3k_4k_8k_{10}}} \qquad (169)
\end{aligned}
$$

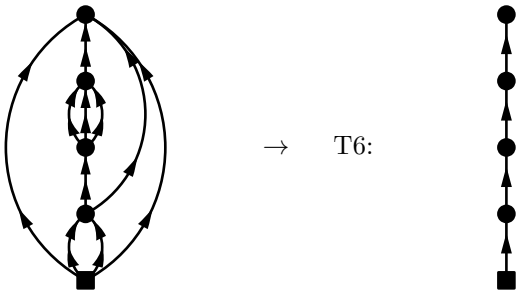


$$
\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \qquad (170)
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6k_7k_8} \\
a_2 &= \epsilon^{k_9}_{k_5k_6k_7} \\
a_3 &= \epsilon^{k_{10}}_{k_1k_2k_9} \\
a_4 &= \epsilon_{k_3k_4k_8k_{10}}
\end{aligned}
$$

Diagram 79:

$$
\begin{aligned}
\mathrm{PO4.79} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{13}_{k_{10}k_7k_8k_9} \Omega^{04}_{k_{10}k_6k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta \\
&= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{13}_{k_{10}k_7k_8k_9} \Omega^{04}_{k_{10}k_6k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_7k_8k_9k_3k_4k_6}\ \epsilon_{k_3k_4k_6k_{10}}} \qquad (171)
\end{aligned}
$$



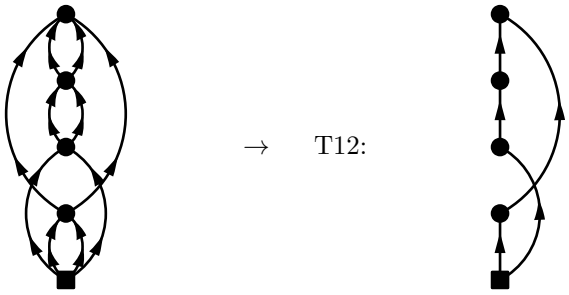
$$
\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \qquad (172)
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\
a_2 &= \epsilon^{k_7k_8k_9}_{k_5} \\
a_3 &= \epsilon^{k_{10}}_{k_7k_8k_9} \\
a_4 &= \epsilon_{k_3k_4k_6k_{10}}
\end{aligned}
$$

Diagram 80:

$$\mathrm{PO4.80} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^5} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{22}_{k_9k_{10}k_7k_8} \Omega^{04}_{k_9k_{10}k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau}$$

$$= \frac{(-1)^4}{(2!)^5} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{22}_{k_9k_{10}k_7k_8} \Omega^{04}_{k_9k_{10}k_5k_6} \left[\frac{1}{\epsilon_{k_1k_2k_9k_{10}}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_7k_8}\ \epsilon_{k_5k_6k_9k_{10}}} + \frac{}{\epsilon_{k_1k_2k_7k_8}\ \epsilon_{k} \right. \tag{173}$$



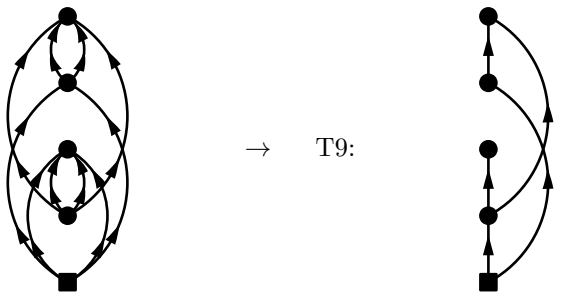
$$\mathrm{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{174}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7k_8}_{k_3k_4}$$
$$a_3 = \epsilon^{k_9k_{10}}_{k_7k_8}$$
$$a_4 = \epsilon_{k_5k_6k_9k_{10}}$$

Diagram 81:

$$\mathrm{PO4.81} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^5} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{22}_{k_9k_{10}k_3k_4} \Omega^{04}_{k_9k_{10}k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau}$$

$$= \frac{(-1)^4}{(2!)^5} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{22}_{k_9k_{10}k_3k_4} \Omega^{04}_{k_9k_{10}k_7k_8} \left[\frac{1}{\epsilon_{k_1k_2k_9k_{10}}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_7k_8k_9k_{10}}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k} \right. \tag{175}$$



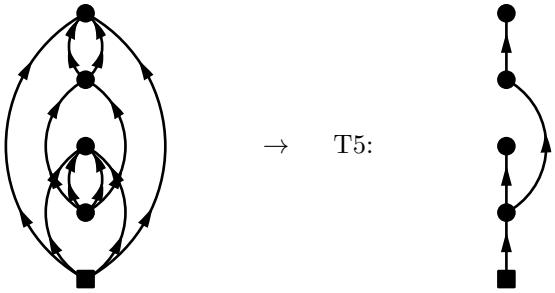
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{176}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_2k_5k_6}$$
$$a_3 = \epsilon^{k_9k_{10}}_{k_3k_4}$$
$$a_4 = \epsilon_{k_7k_8k_9k_{10}}$$

Diagram 82:

$$\mathrm{PO4.82} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^5} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{22}_{k_9k_{10}k_7k_8} \Omega^{04}_{k_9k_{10}k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau}$$

$$= \frac{(-1)^4}{(2!)^5} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{22}_{k_9k_{10}k_7k_8} \Omega^{04}_{k_9k_{10}k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_7k_8k_3k_4}\ \epsilon_{k_3k_4k_9k_{10}}} \tag{177}$$



$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{178}$$

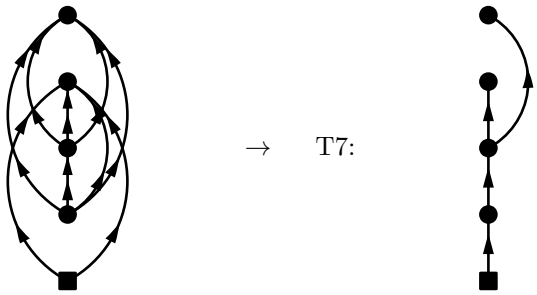
$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_2k_5k_6}$$
$$a_3 = \epsilon^{k_9k_{10}}_{k_7k_8}$$
$$a_4 = \epsilon_{k_3k_4k_9k_{10}}$$

2.2 Two-body canonical diagrams for a generic operator only

Diagram 83:

$$\mathrm{PO4.83} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{31}_{k_7k_8k_9k_3} \Omega^{04}_{k_7k_4k_1k_2} \Omega^{04}_{k_8k_9k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{31}_{k_7k_8k_9k_3} \Omega^{04}_{k_7k_4k_1k_2} \Omega^{04}_{k_8k_9k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4k_5k_6}\ \epsilon_{k_1k_2k_4k_7}\ \epsilon_{k_5k_6k_8k_9}} \tag{179}$$



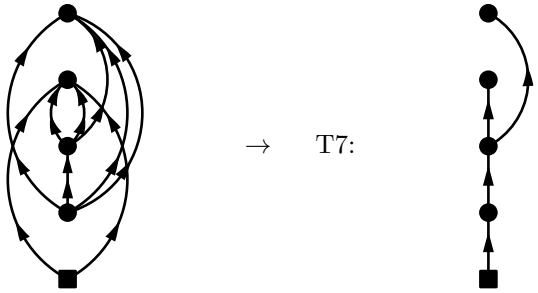
$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{180}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8k_9}_{k_3}$$
$$a_3 = \epsilon_{k_1k_2k_4k_7}$$
$$a_4 = \epsilon_{k_5k_6k_8k_9}$$

Diagram 84:

$$\mathrm{PO4.84} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{31}_{k_7k_8k_9k_3}\Omega^{04}_{k_7k_8k_1k_2}\Omega^{04}_{k_9k_4k_5k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-$$

$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{31}_{k_7k_8k_9k_3}\Omega^{04}_{k_7k_8k_1k_2}\Omega^{04}_{k_9k_4k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4k_5k_6}\ \epsilon_{k_1k_2k_7k_8}\ \epsilon_{k_4k_5k_6k_9}} \tag{181}$$



$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{182}$$

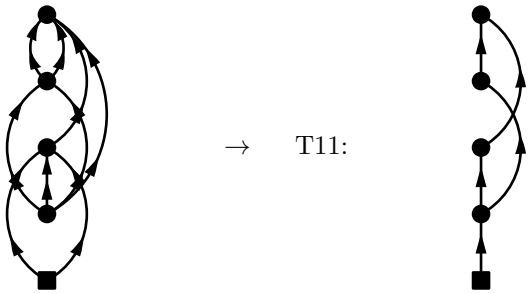
$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8k_9}_{k_3}$$
$$a_3 = \epsilon_{k_1k_2k_7k_8}$$
$$a_4 = \epsilon_{k_4k_5k_6k_9}$$

Diagram 85:

$$\mathrm{PO4.85} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_1k_2}\Omega^{22}_{k_8k_9k_4k_5}\Omega^{04}_{k_8k_9k_7k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_2$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_1k_2}\Omega^{22}_{k_8k_9k_4k_5}\Omega^{04}_{k_8k_9k_7k_6}\left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_6k_8k_9}\ \epsilon_{k_1k_2k_3k_4k_5k_6}\ \epsilon_{k_6k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4}\right.$$

(183)



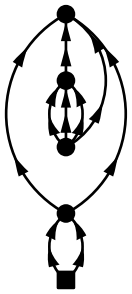
$$\mathrm{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{184}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1k_2k_3}$$
$$a_3 = \epsilon^{k_8k_9}_{k_4k_5}$$
$$a_4 = \epsilon_{k_6k_7k_8k_9}$$

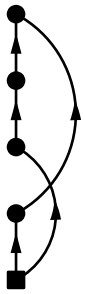
Diagram 86:

$$\mathrm{PO4.86} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_6k_7}\Omega^{04}_{k_9k_8k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-$$

$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{13}_{k_9k_5k_6k_7}\Omega^{04}_{k_9k_8k_3k_4}\left[\frac{1}{\epsilon_{k_1k_2k_8k_9}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_5k_6k_7k_8}\ \epsilon_{k_3k_4k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_5k_6k_7k_8}\ \epsilon_{k_1}}\right. \tag{185}$$



$\rightarrow$ T12:



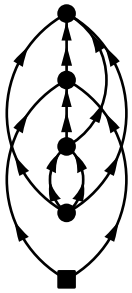
$$\mathrm{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{186}$$

$$a_1 = \epsilon^{k_3k_4}_{k_1k_2}$$
$$a_2 = \epsilon^{k_5k_6k_7k_8}$$
$$a_3 = \epsilon^{k_9}_{k_5k_6k_7}$$
$$a_4 = \epsilon_{k_3k_4k_8k_9}$$

Diagram 87:

$$\mathrm{PO4.87} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_4}\Omega^{13}_{k_9k_7k_1k_2}\Omega^{04}_{k_9k_8k_5k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_4}\Omega^{13}_{k_9k_7k_1k_2}\Omega^{04}_{k_9k_8k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2k_5k_6}\ \epsilon_{k_1k_2k_7k_5k_6k_8}\ \epsilon_{k_5k_6k_8k_9}} \tag{187}$$



$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{188}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_3k_4}$$
$$a_3 = \epsilon^{k_9}_{k_1k_2k_7}$$
$$a_4 = \epsilon_{k_5k_6k_8k_9}$$

Diagram 88:

$$\mathrm{PO4.88} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{31}_{k_5k_6k_7k_3} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{04}_{k_8k_9k_7k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{31}_{k_5k_6k_7k_3} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{04}_{k_8k_9k_7k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6k_4k_7}\ \epsilon_{k_4k_7k_8k_9}} \tag{189}$$

$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{190}$$

$$a_1 = \epsilon^{k_3k_4}_{k_1k_2}$$
$$a_2 = \epsilon^{k_5k_6k_7}_{k_3}$$
$$a_3 = \epsilon^{k_8k_9}_{k_5k_6}$$
$$a_4 = \epsilon_{k_4k_7k_8k_9}$$

Diagram 89:

$$\mathrm{PO4.89} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_5k_6k_3} \Omega^{04}_{k_9k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{13}_{k_9k_5k_6k_3} \Omega^{04}_{k_9k_7k_8k_4} \left[\frac{1}{\epsilon_{k_1k_2k_5k_6k_7k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_5k_6k_4k_7k_8}\ \epsilon_{k_4k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_3} \right.$$

(191)

$\rightarrow$ T13:

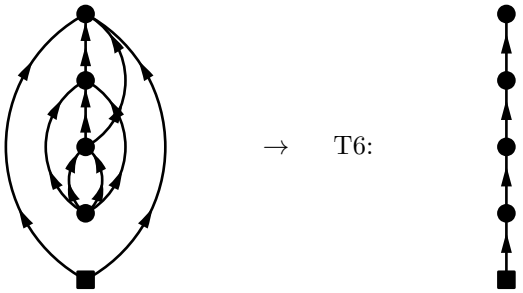
$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{192}$$

$$a_1 = \epsilon^{k_3k_4}_{k_1k_2}$$
$$a_2 = \epsilon^{k_5k_6k_7k_8}$$
$$a_3 = \epsilon^{k_9}_{k_3k_5k_6}$$
$$a_4 = \epsilon_{k_4k_7k_8k_9}$$

Diagram 90:

$$\mathrm{PO4.90} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{13}_{k_9k_7k_5k_6} \Omega^{04}_{k_9k_8k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{13}_{k_9k_7k_5k_6} \Omega^{04}_{k_9k_8k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_6k_1k_2}\ \epsilon_{k_5k_6k_7k_1k_2k_8}\ \epsilon_{k_1k_2k_8k_9}} \tag{193}$$



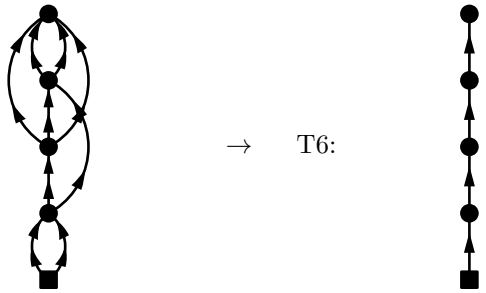
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{194}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_3k_4}$$
$$a_3 = \epsilon^{k_9}_{k_5k_6k_7}$$
$$a_4 = \epsilon_{k_1k_2k_8k_9}$$

Diagram 91:

$$\mathrm{PO4.91} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{31}_{k_5k_6k_7k_3} \Omega^{22}_{k_8k_9k_5k_4} \Omega^{04}_{k_8k_9k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{31}_{k_5k_6k_7k_3} \Omega^{22}_{k_8k_9k_5k_4} \Omega^{04}_{k_8k_9k_6k_7}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_4k_5k_6k_7}\ \epsilon_{k_6k_7k_8k_9}} \tag{195}$$



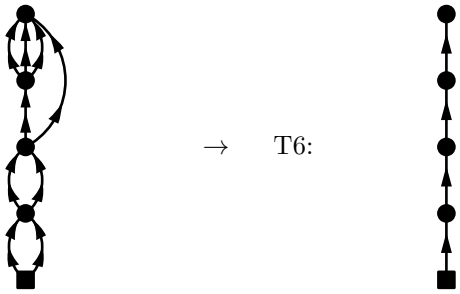
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{196}$$

$$a_1 = \epsilon^{k_3k_4}_{k_1k_2}$$
$$a_2 = \epsilon^{k_5k_6k_7}_{k_3}$$
$$a_3 = \epsilon^{k_8k_9}_{k_4k_5}$$
$$a_4 = \epsilon_{k_6k_7k_8k_9}$$

Diagram 92:

$$\mathrm{PO4.92} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{22}_{k_5k_6k_3k_4} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{04}_{k_7k_8k_9k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-$$

$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{22}_{k_5k_6k_3k_4} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{04}_{k_7k_8k_9k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_6k_7k_8k_9}} \tag{197}$$



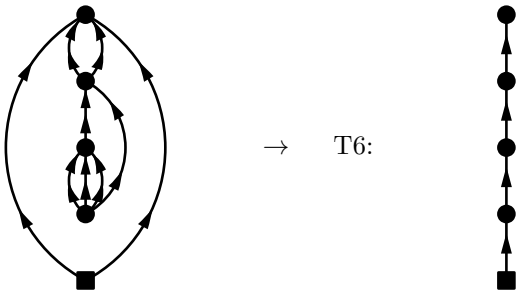
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{198}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4}_{k_1k_2} \\ a_2 &= \epsilon^{k_5k_6}_{k_3k_4} \\ a_3 &= \epsilon^{k_7k_8k_9}_{k_5} \\ a_4 &= \epsilon_{k_6k_7k_8k_9} \end{aligned}$$

Diagram 93:

$$\begin{aligned} \text{PO4.93} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_5}\Omega^{22}_{k_8k_9k_7k_6}\Omega^{04}_{k_8k_9k_1k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_5}\Omega^{22}_{k_8k_9k_7k_6}\Omega^{04}_{k_8k_9k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_6k_1k_2}\ \epsilon_{k_6k_7k_1k_2}\ \epsilon_{k_1k_2k_8k_9}} \end{aligned} \tag{199}$$



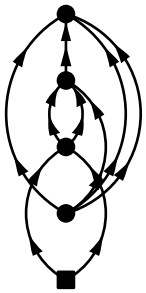
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{200}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon^{k_7}_{k_3k_4k_5} \\ a_3 &= \epsilon^{k_8k_9}_{k_6k_7} \\ a_4 &= \epsilon_{k_1k_2k_8k_9} \end{aligned}$$

Diagram 94:

$$\begin{aligned} \text{PO4.94} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_1k_2}\Omega^{13}_{k_9k_7k_8k_3}\Omega^{04}_{k_9k_4k_5k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_1k_2}\Omega^{13}_{k_9k_7k_8k_3}\Omega^{04}_{k_9k_4k_5k_6}\left[\frac{1}{\epsilon_{k_7k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_7k_8k_4k_5k_6}\ \epsilon_{k_4k_5k_6k_9}} + \frac{}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4k_5k_6}\ \epsilon}\right. \end{aligned} \tag{201}$$



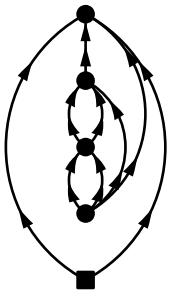
→ T13:

$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{202}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon^{k_7k_8}_{k_1k_2} \\ a_3 &= \epsilon^{k_9}_{k_3k_7k_8} \\ a_4 &= \epsilon_{k_4k_5k_6k_9} \end{aligned}$$

Diagram 95:

$$\begin{aligned} \mathrm{PO4.95} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_4}\Omega^{13}_{k_9k_7k_8k_5}\Omega^{04}_{k_9k_6k_1k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2 \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_4}\Omega^{13}_{k_9k_7k_8k_5}\Omega^{04}_{k_9k_6k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_1k_2k_6}\ \epsilon_{k_5k_7k_8k_1k_2k_6}\ \epsilon_{k_1k_2k_6k_9}} \end{aligned} \tag{203}$$



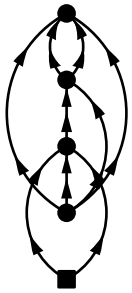
→ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{204}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon^{k_7k_8}_{k_3k_4} \\ a_3 &= \epsilon^{k_9}_{k_5k_7k_8} \\ a_4 &= \epsilon_{k_1k_2k_6k_9} \end{aligned}$$

Diagram 96:

$$\begin{aligned} \mathrm{PO4.96} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_1k_2}\Omega^{22}_{k_8k_9k_7k_4}\Omega^{04}_{k_8k_9k_5k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2 \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_1k_2}\Omega^{22}_{k_8k_9k_7k_4}\Omega^{04}_{k_8k_9k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4k_5k_6}\ \epsilon_{k_4k_7k_5k_6}\ \epsilon_{k_5k_6k_8k_9}} \end{aligned} \tag{205}$$



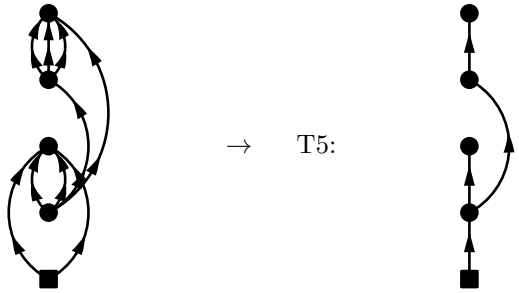
→ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{206}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon^{k_7}_{k_1k_2k_3} \\ a_3 &= \epsilon^{k_8k_9}_{k_4k_7} \\ a_4 &= \epsilon_{k_5k_6k_8k_9} \end{aligned}$$

Diagram 97:

$$\begin{aligned} \mathrm{PO4.97} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_1k_2}\Omega^{31}_{k_7k_8k_9k_5}\Omega^{04}_{k_7k_8k_9k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4- \\ &= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_1k_2}\Omega^{31}_{k_7k_8k_9k_5}\Omega^{04}_{k_7k_8k_9k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_6k_7k_8k_9}} \end{aligned} \tag{207}$$



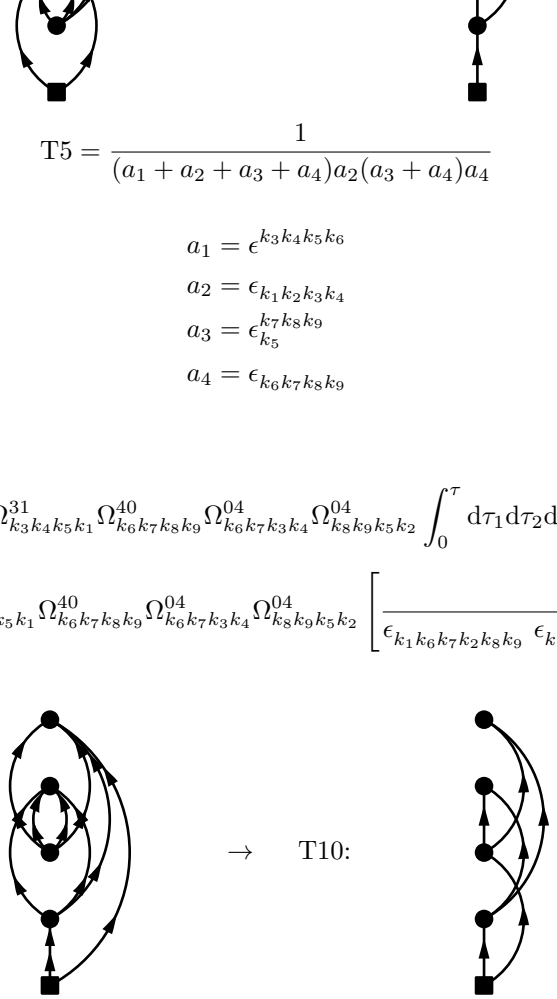
$\rightarrow$ T5:

$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{208}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon_{k_1k_2k_3k_4} \\ a_3 &= \epsilon^{k_7k_8k_9}_{k_5} \\ a_4 &= \epsilon_{k_6k_7k_8k_9} \end{aligned}$$

Diagram 98:

$$\begin{aligned} \mathrm{PO4.98} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{40}_{k_6k_7k_8k_9}\Omega^{04}_{k_6k_7k_3k_4}\Omega^{04}_{k_8k_9k_5k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2 \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{40}_{k_6k_7k_8k_9}\Omega^{04}_{k_6k_7k_3k_4}\Omega^{04}_{k_8k_9k_5k_2}\left[\frac{1}{\epsilon_{k_1k_6k_7k_2k_8k_9}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_6k_7}\ \epsilon_{k_2k_5k_8k_9}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_2k_5}\ \epsilon_{k_3} \right. \end{aligned} \tag{209}$$



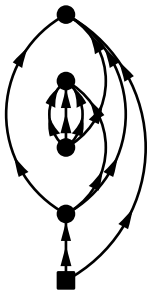
$\rightarrow$ T10:

$$\mathrm{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{210}$$

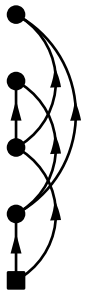
$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\
a_2 &= \epsilon^{k_6k_7k_8k_9} \\
a_3 &= \epsilon_{k_3k_4k_6k_7} \\
a_4 &= \epsilon_{k_2k_5k_8k_9}
\end{aligned}
$$

Diagram 99:

$$
\begin{aligned}
\text{PO4.99} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{40}_{k_6k_7k_8k_9}\Omega^{04}_{k_6k_7k_8k_3}\Omega^{04}_{k_9k_4k_5k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\
&= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{40}_{k_6k_7k_8k_9}\Omega^{04}_{k_6k_7k_8k_3}\Omega^{04}_{k_9k_4k_5k_2}\left[\frac{1}{\epsilon_{k_1k_6k_7k_8k_2k_9}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_6k_7k_8}\ \epsilon_{k_2k_4k_5k_9}} + \frac{}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{}}\right.
\end{aligned}
\tag{211}
$$



$\rightarrow$ T10:

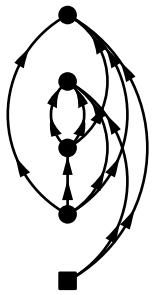


$$
\text{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{212}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\
a_2 &= \epsilon^{k_6k_7k_8k_9} \\
a_3 &= \epsilon_{k_3k_6k_7k_8} \\
a_4 &= \epsilon_{k_2k_4k_5k_9}
\end{aligned}
$$

Diagram 100:

$$
\begin{aligned}
\text{PO4.100} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{31}_{k_7k_8k_9k_3}\Omega^{04}_{k_7k_8k_4k_1}\Omega^{04}_{k_9k_5k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau \\
&= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{31}_{k_7k_8k_9k_3}\Omega^{04}_{k_7k_8k_4k_1}\Omega^{04}_{k_9k_5k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_4k_2k_5k_6}\ \epsilon_{k_1k_4k_7k_8}\ \epsilon_{k_2k_5k_6k_9}}
\end{aligned}
\tag{213}
$$



$\rightarrow$ T7:

$$
\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{214}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4k_5k_6} \\
a_2 &= \epsilon^{k_7k_8k_9}_{k_3} \\
a_3 &= \epsilon_{k_1k_4k_7k_8} \\
a_4 &= \epsilon_{k_2k_5k_6k_9}
\end{aligned}
$$

Diagram 101:

$$\begin{aligned}\mathrm{PO4.101} &= \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^3}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{22}_{k_8k_9k_5k_2}\Omega^{04}_{k_8k_9k_6k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^3}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{22}_{k_8k_9k_5k_2}\Omega^{04}_{k_8k_9k_6k_7}\left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_8k_9}\ \epsilon_{k_3k_4k_2k_5}\ \epsilon_{k_6k_7k_8k_9}}+\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_2k_5}\ \epsilon_{k_2k_5k}\right.\end{aligned} \tag{215}$$

$\rightarrow$ T11:

$$\mathrm{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4}+\frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{216}$$

$$\begin{aligned}a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\ a_2 &= \epsilon^{k_6k_7}_{k_3k_4} \\ a_3 &= \epsilon^{k_8k_9}_{k_2k_5} \\ a_4 &= \epsilon_{k_6k_7k_8k_9}\end{aligned}$$

Diagram 102:

$$\begin{aligned}\mathrm{PO4.102} &= \lim_{\tau\to\infty}\frac{-(-1)^4}{(2!)(3!)}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{13}_{k_9k_4k_5k_2}\Omega^{04}_{k_9k_6k_7k_8}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)(3!)}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{13}_{k_9k_4k_5k_2}\Omega^{04}_{k_9k_6k_7k_8}\left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_9}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_6k_7k_8k_9}}+\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_2k_4k_5k_6}}\right.\end{aligned} \tag{217}$$

$\rightarrow$ T11:

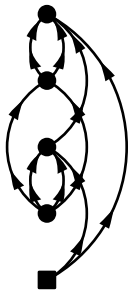
$$\mathrm{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4}+\frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{218}$$

$$\begin{aligned}a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\ a_2 &= \epsilon^{k_6k_7k_8}_{k_3} \\ a_3 &= \epsilon^{k_9}_{k_2k_4k_5} \\ a_4 &= \epsilon_{k_6k_7k_8k_9}\end{aligned}$$

Diagram 103:

$$\mathrm{PO4.103} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{13}_{k_7k_3k_4k_1} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{04}_{k_8k_9k_7k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{13}_{k_7k_3k_4k_1} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{04}_{k_8k_9k_7k_2} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_2k_8k_9}\ \epsilon_{k_1k_3k_4k_5k_6k_2}\ \epsilon_{k_2k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k} \right. \tag{219}$$



$\rightarrow$ T11:

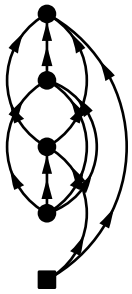
$$\mathrm{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{220}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1k_3k_4}$$
$$a_3 = \epsilon^{k_8k_9}_{k_5k_6}$$
$$a_4 = \epsilon_{k_2k_7k_8k_9}$$

Diagram 104:

$$\mathrm{PO4.104} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{22}_{k_7k_8k_3k_1} \Omega^{13}_{k_9k_4k_5k_6} \Omega^{04}_{k_9k_7k_8k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{22}_{k_7k_8k_3k_1} \Omega^{13}_{k_9k_4k_5k_6} \Omega^{04}_{k_9k_7k_8k_2} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_9}\ \epsilon_{k_1k_3k_4k_5k_6k_2}\ \epsilon_{k_2k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_5k_} \right. \tag{221}$$



$\rightarrow$ T11:

$$\mathrm{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{222}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_1k_3}$$
$$a_3 = \epsilon^{k_9}_{k_4k_5k_6}$$
$$a_4 = \epsilon_{k_2k_7k_8k_9}$$

Diagram 105:

$$\mathrm{PO4.105} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{22}_{k_8k_9k_5k_2}\Omega^{04}_{k_8k_9k_7k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{22}_{k_8k_9k_5k_2}\Omega^{04}_{k_8k_9k_7k_6} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_6k_8k_9}\ \epsilon_{k_1k_3k_4k_2k_5k_6}\ \epsilon_{k_6k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_} \right. \tag{223}$$

$\rightarrow$ T11:

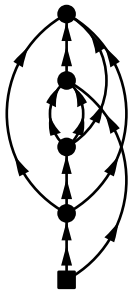
$$\mathrm{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{224}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1k_3k_4}$$
$$a_3 = \epsilon^{k_8k_9}_{k_2k_5}$$
$$a_4 = \epsilon_{k_6k_7k_8k_9}$$

Diagram 106:

$$\mathrm{PO4.106} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{13}_{k_9k_6k_7k_2}\Omega^{04}_{k_9k_8k_4k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{13}_{k_9k_6k_7k_2}\Omega^{04}_{k_9k_8k_4k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_2k_6k_7k_4k_5k_8}\ \epsilon_{k_4k_5k_8k_9}} \tag{225}$$



$\rightarrow$ T6:

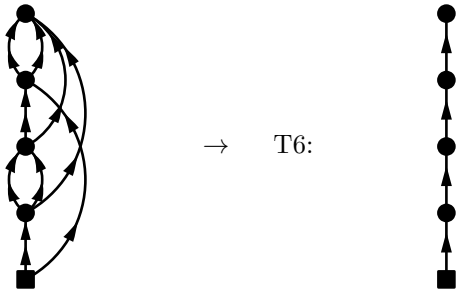
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{226}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7k_8}_{k_3}$$
$$a_3 = \epsilon^{k_9}_{k_2k_6k_7}$$
$$a_4 = \epsilon_{k_4k_5k_8k_9}$$

Diagram 107:

$$\mathrm{PO4.107} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{22}_{k_8k_9k_6k_2}\Omega^{04}_{k_8k_9k_7k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{22}_{k_8k_9k_6k_2}\Omega^{04}_{k_8k_9k_7k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_2k_5}\ \epsilon_{k_2k_6k_5k_7}\ \epsilon_{k_5k_7k_8k_9}} \tag{227}$$



$\rightarrow$ T6:

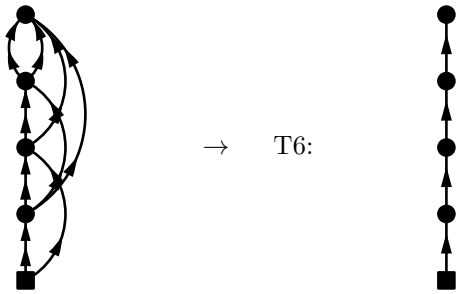
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{228}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7}_{k_3k_4}$$
$$a_3 = \epsilon^{k_8k_9}_{k_2k_6}$$
$$a_4 = \epsilon_{k_5k_7k_8k_9}$$

Diagram 108:

$$\mathrm{PO4.108} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_2}\Omega^{22}_{k_8k_9k_6k_4}\Omega^{04}_{k_8k_9k_7k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_2}\Omega^{22}_{k_8k_9k_6k_4}\Omega^{04}_{k_8k_9k_7k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_4k_6k_5k_7}\ \epsilon_{k_5k_7k_8k_9}} \tag{229}$$



$\rightarrow$ T6:

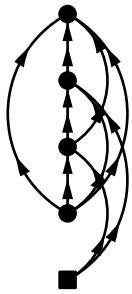
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{230}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7}_{k_2k_3}$$
$$a_3 = \epsilon^{k_8k_9}_{k_4k_6}$$
$$a_4 = \epsilon_{k_5k_7k_8k_9}$$

Diagram 109:

$$\mathrm{PO4.109} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_1}\Omega^{13}_{k_9k_7k_4k_2}\Omega^{04}_{k_9k_8k_5k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_1}\Omega^{13}_{k_9k_7k_4k_2}\Omega^{04}_{k_9k_8k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4k_5k_6}\ \epsilon_{k_2k_4k_7k_5k_6k_8}\ \epsilon_{k_5k_6k_8k_9}} \tag{231}$$



$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{232}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_1k_3}$$
$$a_3 = \epsilon^{k_9}_{k_2k_4k_7}$$
$$a_4 = \epsilon_{k_5k_6k_8k_9}$$

Diagram 110:

$$\text{PO4.110} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{13}_{k_9k_6k_4k_2}\Omega^{04}_{k_9k_7k_8k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-$$
$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{13}_{k_9k_6k_4k_2}\Omega^{04}_{k_9k_7k_8k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_2k_4k_6k_5k_7k_8}\ \epsilon_{k_5k_7k_8k_9}} \tag{233}$$

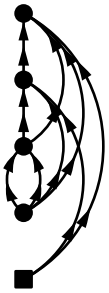
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{234}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7k_8}_{k_3}$$
$$a_3 = \epsilon^{k_9}_{k_2k_4k_6}$$
$$a_4 = \epsilon_{k_5k_7k_8k_9}$$

Diagram 111:

$$\text{PO4.111} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_4}\Omega^{13}_{k_9k_7k_5k_1}\Omega^{04}_{k_9k_8k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-$$
$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_4}\Omega^{13}_{k_9k_7k_5k_1}\Omega^{04}_{k_9k_8k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_5k_2k_6}\ \epsilon_{k_1k_5k_7k_2k_6k_8}\ \epsilon_{k_2k_6k_8k_9}} \tag{235}$$



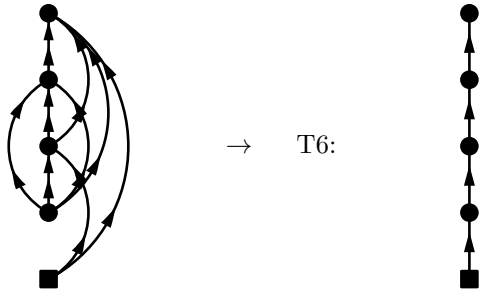
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{236}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon^{k_7k_8}_{k_3k_4} \\ a_3 &= \epsilon^{k_9}_{k_1k_5k_7} \\ a_4 &= \epsilon_{k_2k_6k_8k_9} \end{aligned}$$

Diagram 112:

$$\begin{aligned} \mathrm{PO4.112} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_1}\Omega^{13}_{k_9k_7k_4k_5}\Omega^{04}_{k_9k_8k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3- \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_1}\Omega^{13}_{k_9k_7k_4k_5}\Omega^{04}_{k_9k_8k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_5k_2k_6}\ \epsilon_{k_4k_5k_7k_2k_6k_8}\ \epsilon_{k_2k_6k_8k_9}} \end{aligned} \tag{237}$$



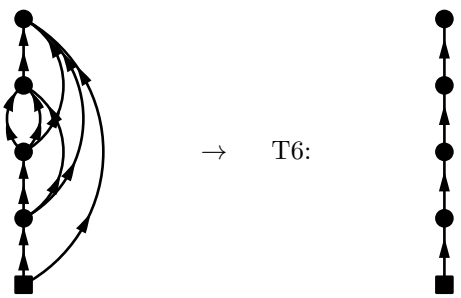
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{238}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon^{k_7k_8}_{k_1k_3} \\ a_3 &= \epsilon^{k_9}_{k_4k_5k_7} \\ a_4 &= \epsilon_{k_2k_6k_8k_9} \end{aligned}$$

Diagram 113:

$$\begin{aligned} \mathrm{PO4.113} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{13}_{k_9k_6k_7k_4}\Omega^{04}_{k_9k_8k_5k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3- \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{13}_{k_9k_6k_7k_4}\Omega^{04}_{k_9k_8k_5k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_2k_5}\ \epsilon_{k_4k_6k_7k_2k_5k_8}\ \epsilon_{k_2k_5k_8k_9}} \end{aligned} \tag{239}$$



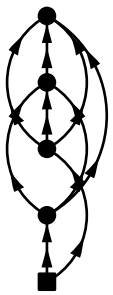
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{240}$$

$$a_1 = \epsilon^{k_3 k_4 k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6 k_7 k_8}_{k_3}$$
$$a_3 = \epsilon^{k_9}_{k_4 k_6 k_7}$$
$$a_4 = \epsilon_{k_2 k_5 k_8 k_9}$$

Diagram 114:

$$\text{PO4.114} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{31}_{k_6 k_7 k_8 k_2} \Omega^{13}_{k_9 k_6 k_3 k_4} \Omega^{04}_{k_9 k_7 k_8 k_5} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-$$
$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{31}_{k_6 k_7 k_8 k_2} \Omega^{13}_{k_9 k_6 k_3 k_4} \Omega^{04}_{k_9 k_7 k_8 k_5} \left[\frac{1}{\epsilon_{k_1 k_6 k_7 k_8}\ \epsilon_{k_1 k_2}\ \epsilon_{k_3 k_4 k_6 k_5 k_7 k_8}\ \epsilon_{k_5 k_7 k_8 k_9}} + \frac{}{\epsilon_{k_1 k_2}\ \epsilon_{k_2 k_3 k_4 k_5}\ } \right. \tag{241}$$



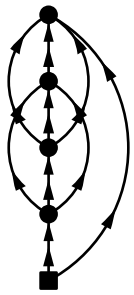
$\rightarrow$ T13:

$$\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{242}$$

$$a_1 = \epsilon^{k_3 k_4 k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6 k_7 k_8}_{k_2}$$
$$a_3 = \epsilon^{k_9}_{k_3 k_4 k_6}$$
$$a_4 = \epsilon_{k_5 k_7 k_8 k_9}$$

Diagram 115:

$$\text{PO4.115} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{31}_{k_6 k_7 k_8 k_3} \Omega^{13}_{k_9 k_6 k_4 k_5} \Omega^{04}_{k_9 k_7 k_8 k_2} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau$$
$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{31}_{k_6 k_7 k_8 k_3} \Omega^{13}_{k_9 k_6 k_4 k_5} \Omega^{04}_{k_9 k_7 k_8 k_2}}{\epsilon_{k_1 k_2}\ \epsilon_{k_3 k_4 k_5 k_2}\ \epsilon_{k_4 k_5 k_6 k_2 k_7 k_8}\ \epsilon_{k_2 k_7 k_8 k_9}} \tag{243}$$



$\rightarrow$ T6:

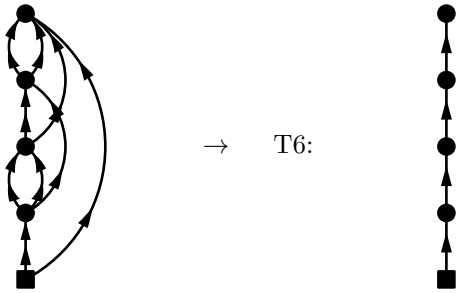
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{244}$$

$$a_1 = \epsilon^{k_3 k_4 k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6 k_7 k_8}_{k_3}$$
$$a_3 = \epsilon^{k_9}_{k_4 k_5 k_6}$$
$$a_4 = \epsilon_{k_2 k_7 k_8 k_9}$$

Diagram 116:

$$\mathrm{PO4.116} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{22}_{k_8k_9k_6k_5}\Omega^{04}_{k_8k_9k_7k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{22}_{k_8k_9k_6k_5}\Omega^{04}_{k_8k_9k_7k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_2}\ \epsilon_{k_5k_6k_2k_7}\ \epsilon_{k_2k_7k_8k_9}} \tag{245}$$



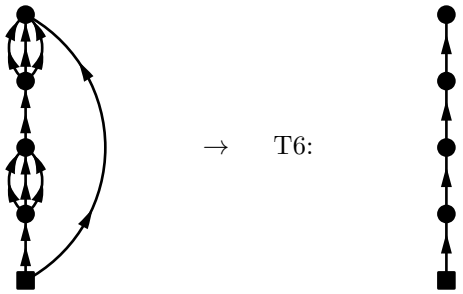
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{246}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7}_{k_3k_4}$$
$$a_3 = \epsilon^{k_8k_9}_{k_5k_6}$$
$$a_4 = \epsilon_{k_2k_7k_8k_9}$$

Diagram 117:

$$\mathrm{PO4.117} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{13}_{k_6k_3k_4k_5}\Omega^{31}_{k_7k_8k_9k_6}\Omega^{04}_{k_7k_8k_9k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k}_{k_1}}$$

$$= \frac{(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{13}_{k_6k_3k_4k_5}\Omega^{31}_{k_7k_8k_9k_6}\Omega^{04}_{k_7k_8k_9k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_2}\ \epsilon_{k_6k_2}\ \epsilon_{k_2k_7k_8k_9}} \tag{247}$$



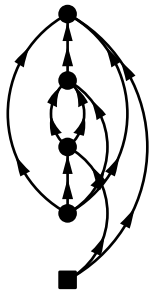
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{248}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6}_{k_3k_4k_5}$$
$$a_3 = \epsilon^{k_7k_8k_9}_{k_6}$$
$$a_4 = \epsilon_{k_2k_7k_8k_9}$$

Diagram 118:

$$\mathrm{PO4.118} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_1}\Omega^{13}_{k_9k_7k_8k_4}\Omega^{04}_{k_9k_5k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_1}\Omega^{13}_{k_9k_7k_8k_4}\Omega^{04}_{k_9k_5k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_2k_5k_6}\ \epsilon_{k_4k_7k_8k_2k_5k_6}\ \epsilon_{k_2k_5k_6k_9}} \tag{249}$$



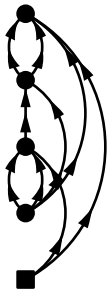
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{250}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_1k_3}$$
$$a_3 = \epsilon^{k_9}_{k_4k_7k_8}$$
$$a_4 = \epsilon_{k_2k_5k_6k_9}$$

Diagram 119:

$$\mathrm{PO4.119} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{22}_{k_8k_9k_7k_5}\Omega^{04}_{k_8k_9k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau$$
$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{22}_{k_8k_9k_7k_5}\Omega^{04}_{k_8k_9k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_5k_2k_6}\ \epsilon_{k_5k_7k_2k_6}\ \epsilon_{k_2k_6k_8k_9}} \tag{251}$$



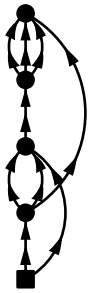
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{252}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1k_3k_4}$$
$$a_3 = \epsilon^{k_8k_9}_{k_5k_7}$$
$$a_4 = \epsilon_{k_2k_6k_8k_9}$$

Diagram 120:

$$\mathrm{PO4.120} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{13}_{k_6k_3k_4k_2}\Omega^{31}_{k_7k_8k_9k_6}\Omega^{04}_{k_7k_8k_9k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-$$
$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{13}_{k_6k_3k_4k_2}\Omega^{31}_{k_7k_8k_9k_6}\Omega^{04}_{k_7k_8k_9k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_6k_5}\ \epsilon_{k_5k_7k_8k_9}} \tag{253}$$



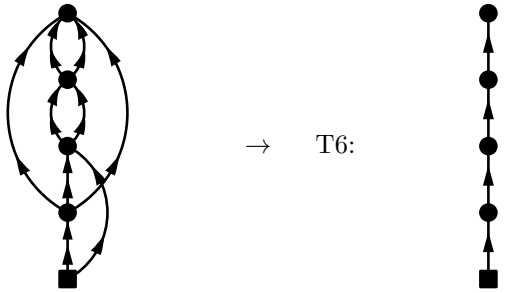
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{254}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\ a_2 &= \epsilon^{k_6}_{k_2k_3k_4} \\ a_3 &= \epsilon^{k_7k_8k_9}_{k_6} \\ a_4 &= \epsilon_{k_5k_7k_8k_9} \end{aligned}$$

Diagram 121:

$$\begin{aligned} \mathrm{PO4.121} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_2}\Omega^{22}_{k_8k_9k_6k_7}\Omega^{04}_{k_8k_9k_4k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^3}\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_2}\Omega^{22}_{k_8k_9k_6k_7}\Omega^{04}_{k_8k_9k_4k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_6k_7k_4k_5}\ \epsilon_{k_4k_5k_8k_9}} \end{aligned} \tag{255}$$



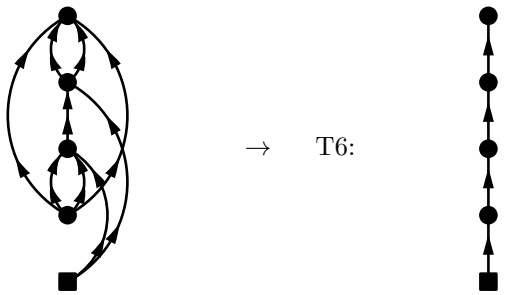
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{256}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\ a_2 &= \epsilon^{k_6k_7}_{k_2k_3} \\ a_3 &= \epsilon^{k_8k_9}_{k_6k_7} \\ a_4 &= \epsilon_{k_4k_5k_8k_9} \end{aligned}$$

Diagram 122:

$$\begin{aligned} \mathrm{PO4.122} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{22}_{k_8k_9k_7k_2}\Omega^{04}_{k_8k_9k_5k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^3}\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{22}_{k_8k_9k_7k_2}\Omega^{04}_{k_8k_9k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_2k_5k_6}\ \epsilon_{k_2k_7k_5k_6}\ \epsilon_{k_5k_6k_8k_9}} \end{aligned} \tag{257}$$



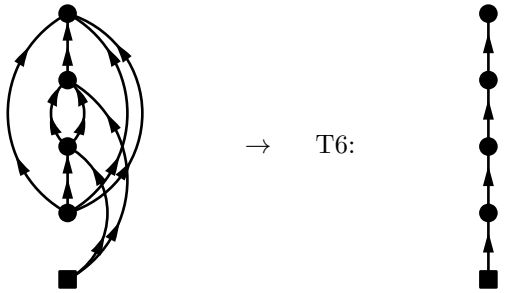
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{258}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4k_5k_6} \\
a_2 &= \epsilon^{k_7}_{k_1k_3k_4} \\
a_3 &= \epsilon^{k_8k_9}_{k_2k_7} \\
a_4 &= \epsilon_{k_5k_6k_8k_9}
\end{aligned}
$$

Diagram 123:

$$
\begin{aligned}
\text{PO4.123} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{22}_{k_7k_8k_3k_1} \Omega^{13}_{k_9k_7k_8k_2} \Omega^{04}_{k_9k_4k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\
&= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{22}_{k_7k_8k_3k_1} \Omega^{13}_{k_9k_7k_8k_2} \Omega^{04}_{k_9k_4k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4k_5k_6}\ \epsilon_{k_2k_7k_8k_4k_5k_6}\ \epsilon_{k_4k_5k_6k_9}}
\end{aligned} \tag{259}
$$

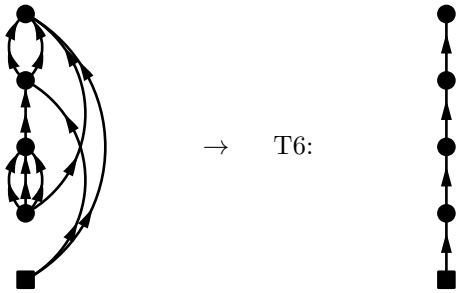


$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{260}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4k_5k_6} \\
a_2 &= \epsilon^{k_7k_8}_{k_1k_3} \\
a_3 &= \epsilon^{k_9}_{k_2k_7k_8} \\
a_4 &= \epsilon_{k_4k_5k_6k_9}
\end{aligned}
$$

Diagram 124:

$$
\begin{aligned}
\text{PO4.124} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{13}_{k_7k_3k_4k_5} \Omega^{22}_{k_8k_9k_7k_1} \Omega^{04}_{k_8k_9k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\
&= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{13}_{k_7k_3k_4k_5} \Omega^{22}_{k_8k_9k_7k_1} \Omega^{04}_{k_8k_9k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_1k_2k_6}\ \epsilon_{k_1k_7k_2k_6}\ \epsilon_{k_2k_6k_8k_9}}
\end{aligned} \tag{261}
$$



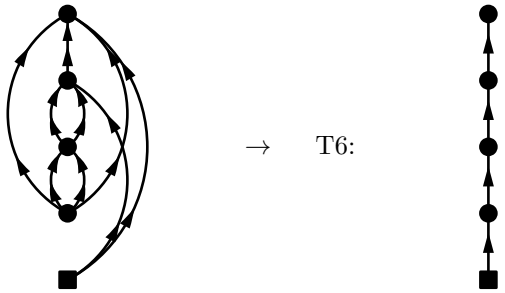
$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{262}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4k_5k_6} \\
a_2 &= \epsilon^{k_7}_{k_3k_4k_5} \\
a_3 &= \epsilon^{k_8k_9}_{k_1k_7} \\
a_4 &= \epsilon_{k_2k_6k_8k_9}
\end{aligned}
$$

Diagram 125:

$$\text{PO4.125} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{13}_{k_9k_7k_8k_1} \Omega^{04}_{k_9k_5k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{13}_{k_9k_7k_8k_1} \Omega^{04}_{k_9k_5k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2k_5k_6}\ \epsilon_{k_1k_7k_8k_2k_5k_6}\ \epsilon_{k_2k_5k_6k_9}} \tag{263}$$



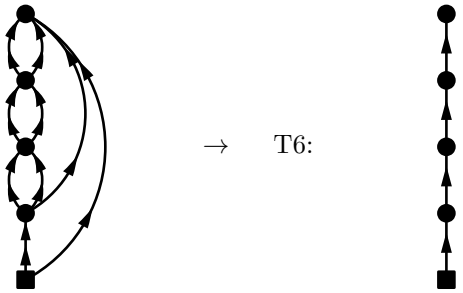
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{264}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_3k_4}$$
$$a_3 = \epsilon^{k_9}_{k_1k_7k_8}$$
$$a_4 = \epsilon_{k_2k_5k_6k_9}$$

Diagram 126:

$$\text{PO4.126} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{31}_{k_3k_4k_5k_1} \Omega^{22}_{k_6k_7k_3k_4} \Omega^{22}_{k_8k_9k_6k_7} \Omega^{04}_{k_8k_9k_5k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{31}_{k_3k_4k_5k_1} \Omega^{22}_{k_6k_7k_3k_4} \Omega^{22}_{k_8k_9k_6k_7} \Omega^{04}_{k_8k_9k_5k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_2k_5}\ \epsilon_{k_6k_7k_2k_5}\ \epsilon_{k_2k_5k_8k_9}} \tag{265}$$



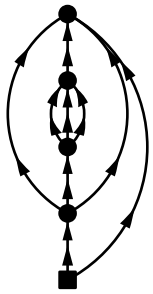
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{266}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7}_{k_3k_4}$$
$$a_3 = \epsilon^{k_8k_9}_{k_6k_7}$$
$$a_4 = \epsilon_{k_2k_5k_8k_9}$$

Diagram 127:

$$\text{PO4.127} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{31}_{k_3k_4k_5k_1} \Omega^{31}_{k_6k_7k_8k_3} \Omega^{13}_{k_9k_6k_7k_8} \Omega^{04}_{k_9k_4k_5k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{31}_{k_3k_4k_5k_1} \Omega^{31}_{k_6k_7k_8k_3} \Omega^{13}_{k_9k_6k_7k_8} \Omega^{04}_{k_9k_4k_5k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_6k_7k_8k_2k_4k_5}\ \epsilon_{k_2k_4k_5k_9}} \tag{267}$$



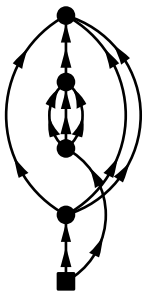
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{268}$$

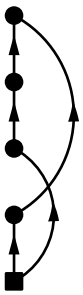
$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3k_4k_5} \\ a_2 &= \epsilon_{k_3}^{k_6k_7k_8} \\ a_3 &= \epsilon_{k_6k_7k_8}^{k_9} \\ a_4 &= \epsilon_{k_2k_4k_5k_9} \end{aligned}$$

Diagram 128:

$$\begin{aligned} \mathrm{PO4.128} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_2}\Omega^{13}_{k_9k_6k_7k_8}\Omega^{04}_{k_9k_3k_4k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k}_{k} \\ &= \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_2}\Omega^{13}_{k_9k_6k_7k_8}\Omega^{04}_{k_9k_3k_4k_5}\left[\frac{1}{\epsilon_{k_1k_9}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_6k_7k_8}\ \epsilon_{k_3k_4k_5k_9}} + \frac{1}{\epsilon_{k_1k_6k_7k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_6k_7k_8k_9}} \right. \end{aligned} \tag{269}$$



$\rightarrow$ T12:

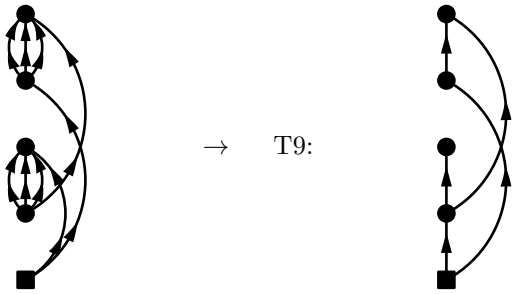


$$\mathrm{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{270}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3k_4k_5} \\ a_2 &= \epsilon_{k_2}^{k_6k_7k_8} \\ a_3 &= \epsilon_{k_6k_7k_8}^{k_9} \\ a_4 &= \epsilon_{k_3k_4k_5k_9} \end{aligned}$$

Diagram 129:

$$\begin{aligned} \mathrm{PO4.129} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_5k_1}\Omega^{31}_{k_7k_8k_9k_2}\Omega^{04}_{k_7k_8k_9k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k} \\ &= \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_5k_1}\Omega^{31}_{k_7k_8k_9k_2}\Omega^{04}_{k_7k_8k_9k_6}\left[\frac{1}{\epsilon_{k_1k_7k_8k_9}\ \epsilon_{k_1k_3k_4k_5}\ \epsilon_{k_1k_2}\ \epsilon_{k_6k_7k_8k_9}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_5}\ \epsilon_{k_2k_6}\ } \right. \end{aligned} \tag{271}$$

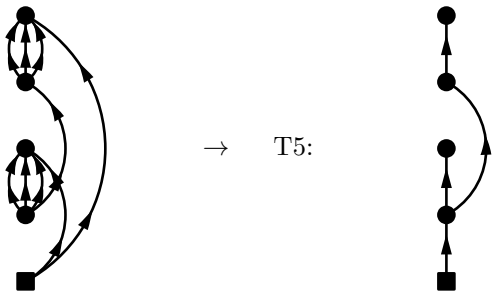


$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{272}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon_{k_1k_3k_4k_5} \\ a_3 &= \epsilon^{k_7k_8k_9}_{k_2} \\ a_4 &= \epsilon_{k_6k_7k_8k_9} \end{aligned}$$

Diagram 130:

$$\begin{aligned} \text{PO4.130} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_5k_1}\Omega^{31}_{k_7k_8k_9k_6}\Omega^{04}_{k_7k_8k_9k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k} \\ &= \frac{-(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_5k_1}\Omega^{31}_{k_7k_8k_9k_6}\Omega^{04}_{k_7k_8k_9k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_5}\ \epsilon_{k_6k_2}\ \epsilon_{k_2k_7k_8k_9}} \end{aligned} \tag{273}$$



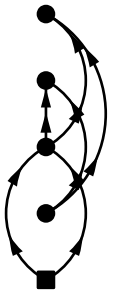
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{274}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon_{k_1k_3k_4k_5} \\ a_3 &= \epsilon^{k_7k_8k_9}_{k_6} \\ a_4 &= \epsilon_{k_2k_7k_8k_9} \end{aligned}$$

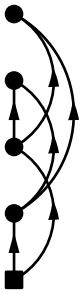
2.3 Two-body non-canonical diagrams

Diagram 131:

$$\begin{aligned} \text{PO4.131} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{02}_{k_5k_3}\Omega^{02}_{k_6k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon^{k_3k} \\ &= \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{02}_{k_5k_3}\Omega^{02}_{k_6k_4} \left[\frac{1}{\epsilon_{k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_5}\ \epsilon_{k_4k_6}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5}\ \epsilon_{k_4k_6}}\right] \end{aligned} \tag{275}$$



$\rightarrow$ T10:

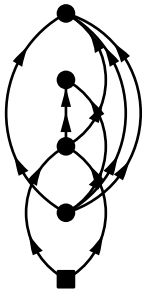


$$\text{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{276}$$

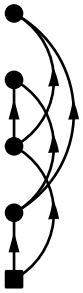
$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_3 &= \epsilon_{k_3k_5} \\ a_4 &= \epsilon_{k_4k_6} \end{aligned}$$

Diagram 132:

$$\begin{aligned} \text{PO4.132} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_1k_2}\Omega^{02}_{k_7k_3}\Omega^{04}_{k_8k_4k_5k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) \\ &= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_1k_2}\Omega^{02}_{k_7k_3}\Omega^{04}_{k_8k_4k_5k_6}\left[\frac{1}{\epsilon_{k_7k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_7}\ \epsilon_{k_4k_5k_6k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4k_5k_6}\ \epsilon_{k_3k_7}\ \epsilon_{k_4k_5k_6}}\right. \end{aligned} \tag{277}$$



$\rightarrow$ T10:

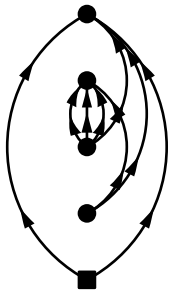


$$\text{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{278}$$

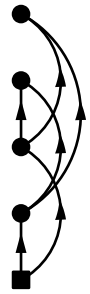
$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon^{k_7k_8}_{k_1k_2} \\ a_3 &= \epsilon_{k_3k_7} \\ a_4 &= \epsilon_{k_4k_5k_6k_8} \end{aligned}$$

Diagram 133:

$$\begin{aligned} \text{PO4.133} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_6k_7k_3}\Omega^{04}_{k_8k_4k_1k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) \\ &= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_6k_7k_3}\Omega^{04}_{k_8k_4k_1k_2}\left[\frac{1}{\epsilon_{k_5k_6k_7k_1k_2k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_5k_6k_7}\ \epsilon_{k_1k_2k_4k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_3k_5}}\right. \end{aligned} \tag{279}$$



$\rightarrow$ T10:



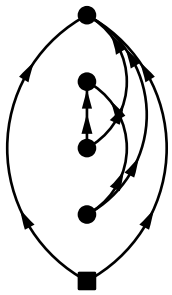
$$\text{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{280}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6k_7k_8}$$
$$a_3 = \epsilon_{k_3k_5k_6k_7}$$
$$a_4 = \epsilon_{k_1k_2k_4k_8}$$

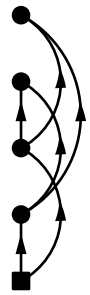
Diagram 134:

$$\text{PO4.134} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_5k_3}\Omega^{04}_{k_6k_4k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon^{k_3k}}$$

$$= \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_5k_3}\Omega^{04}_{k_6k_4k_1k_2} \left[\frac{1}{\epsilon_{k_5k_1k_2k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_5}\ \epsilon_{k_1k_2k_4k_6}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_3k_5}\ \epsilon_{k_1k_2k_4k_6}}\right] \tag{281}$$



$\rightarrow$ T10:



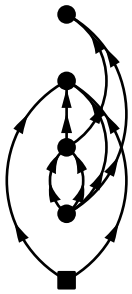
$$\text{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{282}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6}$$
$$a_3 = \epsilon_{k_3k_5}$$
$$a_4 = \epsilon_{k_1k_2k_4k_6}$$

Diagram 135:

$$\text{PO4.135} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_4}\Omega^{04}_{k_7k_5k_1k_2}\Omega^{02}_{k_8k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_4}\Omega^{04}_{k_7k_5k_1k_2}\Omega^{02}_{k_8k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2k_5k_6}\ \epsilon_{k_1k_2k_5k_7}\ \epsilon_{k_6k_8}} \tag{283}$$



$\rightarrow$ T7:

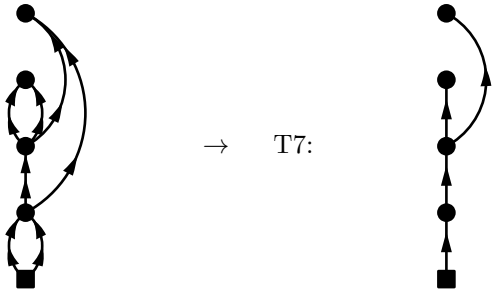
$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{284}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_3k_4}$$
$$a_3 = \epsilon_{k_1k_2k_5k_7}$$
$$a_4 = \epsilon_{k_6k_8}$$

Diagram 136:

$$\mathrm{PO4.136} = \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^2}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{02}_{k_5k_6}\Omega^{02}_{k_7k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2}\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{02}_{k_5k_6}\Omega^{02}_{k_7k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_4k_7}} \tag{285}$$



$\rightarrow$ T7:

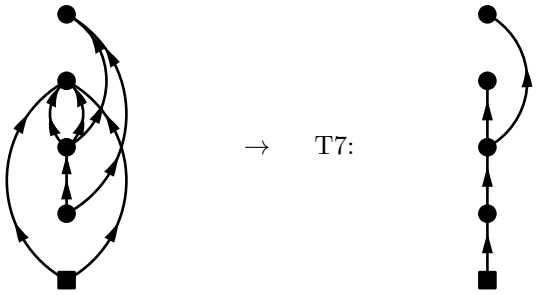
$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{286}$$

$$a_1 = \epsilon^{k_3k_4}_{k_1k_2}$$
$$a_2 = \epsilon^{k_5k_6k_7}_{k_3}$$
$$a_3 = \epsilon_{k_5k_6}$$
$$a_4 = \epsilon_{k_4k_7}$$

Diagram 137:

$$\mathrm{PO4.137} = \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^2}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{04}_{k_5k_6k_1k_2}\Omega^{02}_{k_7k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2}\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{04}_{k_5k_6k_1k_2}\Omega^{02}_{k_7k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_4k_7}} \tag{287}$$



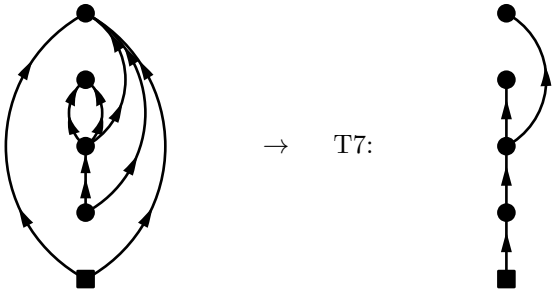
$\rightarrow$ T7:

$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{288}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6k_7}_{k_3}$$
$$a_3 = \epsilon_{k_1k_2k_5k_6}$$
$$a_4 = \epsilon_{k_4k_7}$$

Diagram 138:

$$\begin{aligned}\text{PO4.138} &= \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^2}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{02}_{k_5k_6}\Omega^{04}_{k_7k_4k_1k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon}\\ &= \frac{(-1)^4}{(2!)^2}\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{02}_{k_5k_6}\Omega^{04}_{k_7k_4k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_1k_2k_4k_7}}\end{aligned} \tag{289}$$

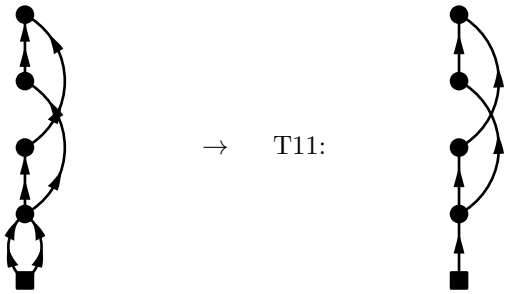


$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{290}$$

$$\begin{aligned}a_1 &= \epsilon^{k_3k_4}\\ a_2 &= \epsilon^{k_5k_6k_7}_{k_3}\\ a_3 &= \epsilon_{k_5k_6}\\ a_4 &= \epsilon_{k_1k_2k_4k_7}\end{aligned}$$

Diagram 139:

$$\begin{aligned}\text{PO4.139} &= \lim_{\tau\to\infty}\frac{-(-1)^4}{2(2!)}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{11}_{k_5k_3}\Omega^{11}_{k_6k_4}\Omega^{02}_{k_6k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k}_{k_1k}}\\ &= \frac{-(-1)^4}{2(2!)}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{11}_{k_5k_3}\Omega^{11}_{k_6k_4}\Omega^{02}_{k_6k_5}\left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_6}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6}}+\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_4k_5}\ \epsilon_{k_5k_6}}\right]\end{aligned} \tag{291}$$

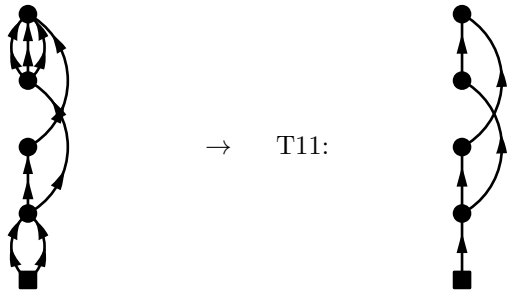


$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4}+\frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{292}$$

$$\begin{aligned}a_1 &= \epsilon^{k_3k_4}_{k_1k_2}\\ a_2 &= \epsilon^{k_5}_{k_3}\\ a_3 &= \epsilon^{k_6}_{k_4}\\ a_4 &= \epsilon_{k_5k_6}\end{aligned}$$

Diagram 140:

$$\begin{aligned}\text{PO4.140} &= \lim_{\tau\to\infty}\frac{-(-1)^4}{(2!)(3!)}\sum_{k_i}O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{11}_{k_5k_3}\Omega^{31}_{k_6k_7k_8k_4}\Omega^{04}_{k_6k_7k_8k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)\\ &= \frac{-(-1)^4}{(2!)(3!)}\sum_{k_i}O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{11}_{k_5k_3}\Omega^{31}_{k_6k_7k_8k_4}\Omega^{04}_{k_6k_7k_8k_5}\left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_6k_7k_8}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6k_7k_8}}+\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_4k_5}\ \epsilon_{k_5k_6k_7k_8}}\right.\end{aligned} \tag{293}$$

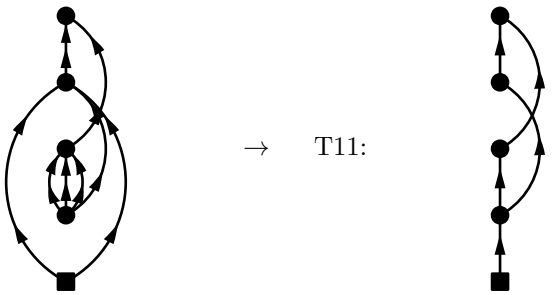


$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4}+\frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{294}$$

$$\begin{aligned}a_1 &= \epsilon^{k_3k_4}_{k_1k_2}\\ a_2 &= \epsilon^{k_5}_{k_3}\\ a_3 &= \epsilon^{k_6k_7k_8}_{k_4}\\ a_4 &= \epsilon_{k_5k_6k_7k_8}\end{aligned}$$

Diagram 141:

$$\begin{aligned}\text{PO4.141} &= \lim_{\tau\to\infty}\frac{-(-1)^4}{(2!)(3!)}\sum_{k_i}O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_5}\Omega^{13}_{k_8k_6k_1k_2}\Omega^{02}_{k_8k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)\\ &= \frac{-(-1)^4}{(2!)(3!)}\sum_{k_i}O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_5}\Omega^{13}_{k_8k_6k_1k_2}\Omega^{02}_{k_8k_7}\left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_8}\ \epsilon_{k_3k_4k_5k_1k_2k_6}\ \epsilon_{k_7k_8}}+\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_1k_2k_6}\ \epsilon_{k_1k_2}\right.\end{aligned} \tag{295}$$



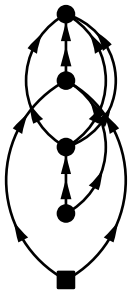
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4}+\frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{296}$$

$$\begin{aligned}a_1 &= \epsilon^{k_3k_4k_5k_6}\\ a_2 &= \epsilon^{k_7}_{k_3k_4k_5}\\ a_3 &= \epsilon^{k_8}_{k_1k_2k_6}\\ a_4 &= \epsilon_{k_7k_8}\end{aligned}$$

Diagram 142:

$$\text{PO4.142} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_4k_1k_2}\Omega^{04}_{k_8k_5k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_4k_1k_2}\Omega^{04}_{k_8k_5k_6k_7} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_8}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_5k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_1k_2k_4k_5k_6k}\right. \tag{297}$$



$\rightarrow$ T11:

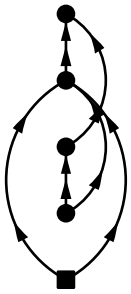
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{298}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5k_6k_7}_{k_3} \\ a_3 &= \epsilon^{k_8}_{k_1k_2k_4} \\ a_4 &= \epsilon_{k_5k_6k_7k_8} \end{aligned}$$

Diagram 143:

$$\text{PO4.143} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{11}_{k_5k_3}\Omega^{13}_{k_6k_4k_1k_2}\Omega^{02}_{k_6k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k}}$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{11}_{k_5k_3}\Omega^{13}_{k_6k_4k_1k_2}\Omega^{02}_{k_6k_5} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_6}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_5k_6}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_1k_2k_4k_5}\ \epsilon_{k_5k_6}}\right] \tag{299}$$



$\rightarrow$ T11:

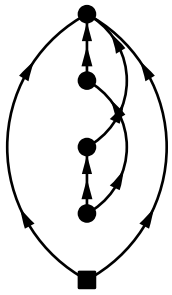
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{300}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5}_{k_3} \\ a_3 &= \epsilon^{k_6}_{k_1k_2k_4} \\ a_4 &= \epsilon_{k_5k_6} \end{aligned}$$

Diagram 144:

$$\text{PO4.144} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{11}_{k_5k_3}\Omega^{11}_{k_6k_4}\Omega^{04}_{k_6k_5k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k}}$$

$$= \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{11}_{k_5k_3}\Omega^{11}_{k_6k_4}\Omega^{04}_{k_6k_5k_1k_2} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_6}\ \epsilon_{k_3k_4k_1k_2}\ \epsilon_{k_1k_2k_5k_6}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2}\ \epsilon_{k_4k_1k_2k_5}\ \epsilon_{k_1k_2k_5}} \right. \tag{301}$$



$\rightarrow$ T11:

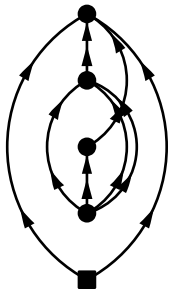
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{302}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5}_{k_3}$$
$$a_3 = \epsilon^{k_6}_{k_4}$$
$$a_4 = \epsilon_{k_1k_2k_5k_6}$$

Diagram 145:

$$\text{PO4.145} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{11}_{k_7k_3}\Omega^{13}_{k_8k_4k_5k_6}\Omega^{04}_{k_8k_7k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{11}_{k_7k_3}\Omega^{13}_{k_8k_4k_5k_6}\Omega^{04}_{k_8k_7k_1k_2} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_8}\ \epsilon_{k_3k_4k_5k_6k_1k_2}\ \epsilon_{k_1k_2k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_6k_1k_2}\ } \right. \tag{303}$$



$\rightarrow$ T11:

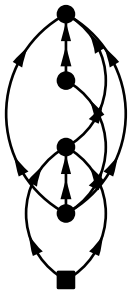
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{304}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_3}$$
$$a_3 = \epsilon^{k_8}_{k_4k_5k_6}$$
$$a_4 = \epsilon_{k_1k_2k_7k_8}$$

Diagram 146:

$$\text{PO4.146} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_1k_2}\Omega^{11}_{k_8k_4}\Omega^{04}_{k_8k_7k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_2)$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_1k_2}\Omega^{11}_{k_8k_4}\Omega^{04}_{k_8k_7k_5k_6} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_5k_6k_8}\ \epsilon_{k_1k_2k_3k_4k_5k_6}\ \epsilon_{k_5k_6k_7k_8}} + \frac{}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4k_}\right. \tag{305}$$



$\rightarrow$ T11:

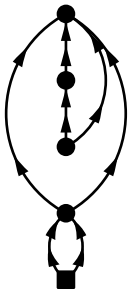
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{306}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1k_2k_3}$$
$$a_3 = \epsilon^{k_8}_{k_4}$$
$$a_4 = \epsilon_{k_5k_6k_7k_8}$$

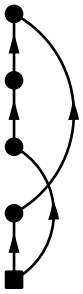
Diagram 147:

$$\text{PO4.147} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{20}_{k_5k_6}\Omega^{11}_{k_7k_5}\Omega^{04}_{k_7k_6k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{20}_{k_5k_6}\Omega^{11}_{k_7k_5}\Omega^{04}_{k_7k_6k_3k_4} \left[\frac{1}{\epsilon_{k_1k_2k_6k_7}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_3k_4k_6k_7}} + \frac{1}{\epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_3k}\right. \tag{307}$$



$\rightarrow$ T12:



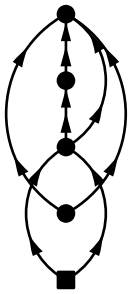
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{308}$$

$$a_1 = \epsilon^{k_3k_4}_{k_1k_2}$$
$$a_2 = \epsilon^{k_5k_6}$$
$$a_3 = \epsilon^{k_7}_{k_5}$$
$$a_4 = \epsilon_{k_3k_4k_6k_7}$$

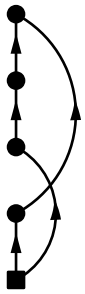
Diagram 148:

$$\mathrm{PO4.148} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{11}_{k_7k_5}\Omega^{04}_{k_7k_6k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{11}_{k_7k_5}\Omega^{04}_{k_7k_6k_3k_4} \left[\frac{1}{\epsilon_{k_6k_7}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_6}\ \epsilon_{k_3k_4k_6k_7}} + \frac{1}{\epsilon_{k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_3k_4k_6k_7}} + \frac{}{\epsilon_{k_1}}\right. \tag{309}$$



$\rightarrow$ T12:



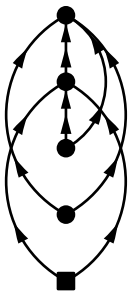
$$\mathrm{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{310}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_3 = \epsilon^{k_7}_{k_5}$$
$$a_4 = \epsilon_{k_3k_4k_6k_7}$$

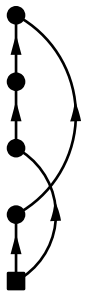
Diagram 149:

$$\mathrm{PO4.149} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{13}_{k_7k_5k_1k_2}\Omega^{04}_{k_7k_6k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{13}_{k_7k_5k_1k_2}\Omega^{04}_{k_7k_6k_3k_4} \left[\frac{1}{\epsilon_{k_6k_7}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_3k_4k_6k_7}} + \frac{1}{\epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_5k_3k_4k_6}\ \epsilon_{k_3k_}\right. \tag{311}$$



$\rightarrow$ T12:



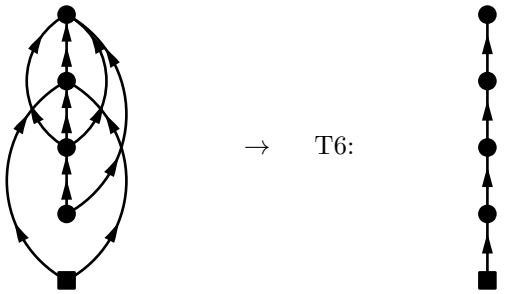
$$\mathrm{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{312}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6}$$
$$a_3 = \epsilon^{k_7}_{k_1k_2k_5}$$
$$a_4 = \epsilon_{k_3k_4k_6k_7}$$

Diagram 150:

$$\text{PO4.150} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_5k_1k_2}\Omega^{04}_{k_8k_6k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta($$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_5k_1k_2}\Omega^{04}_{k_8k_6k_7k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_1k_2k_5k_4k_6k_7}\ \epsilon_{k_4k_6k_7k_8}} \tag{313}$$



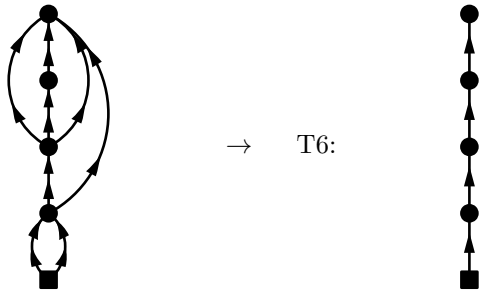
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{314}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6k_7}_{k_3}$$
$$a_3 = \epsilon^{k_8}_{k_1k_2k_5}$$
$$a_4 = \epsilon_{k_4k_6k_7k_8}$$

Diagram 151:

$$\text{PO4.151} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{11}_{k_8k_5}\Omega^{04}_{k_8k_6k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta($$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{11}_{k_8k_5}\Omega^{04}_{k_8k_6k_7k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_4k_6k_7}\ \epsilon_{k_4k_6k_7k_8}} \tag{315}$$



$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{316}$$

$$a_1 = \epsilon^{k_3k_4}_{k_1k_2}$$
$$a_2 = \epsilon^{k_5k_6k_7}_{k_3}$$
$$a_3 = \epsilon^{k_8}_{k_5}$$
$$a_4 = \epsilon_{k_4k_6k_7k_8}$$

Diagram 152:

$$\text{PO4.152} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{20}_{k_5k_6}\Omega^{22}_{k_7k_8k_5k_3}\Omega^{04}_{k_7k_8k_6k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{20}_{k_5k_6}\Omega^{22}_{k_7k_8k_5k_3}\Omega^{04}_{k_7k_8k_6k_4} \left[\frac{1}{\epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_5k_4k_6}\ \epsilon_{k_4k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_3k_5k_4k_6}\ \epsilon_{k_4}} \right. \tag{317}$$

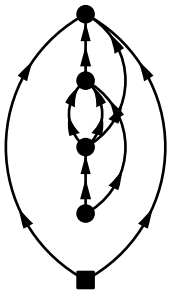
$\rightarrow$ T13:

$$\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{318}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4}_{k_1k_2} \\ a_2 &= \epsilon^{k_5k_6} \\ a_3 &= \epsilon^{k_7k_8}_{k_3k_5} \\ a_4 &= \epsilon_{k_4k_6k_7k_8} \end{aligned}$$

Diagram 153:

$$\begin{aligned} \text{PO4.153} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_5k_6k_4}\Omega^{04}_{k_8k_7k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_5k_6k_4}\Omega^{04}_{k_8k_7k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2}\ \epsilon_{k_4k_5k_6k_1k_2k_7}\ \epsilon_{k_1k_2k_7k_8}} \end{aligned} \tag{319}$$



$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{320}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5k_6k_7}_{k_3} \\ a_3 &= \epsilon^{k_8}_{k_4k_5k_6} \\ a_4 &= \epsilon_{k_1k_2k_7k_8} \end{aligned}$$

Diagram 154:

$$\begin{aligned} \text{PO4.154} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_5k_6k_4}\Omega^{02}_{k_8k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_5k_6k_4}\Omega^{02}_{k_8k_7}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_4k_5k_6k_7}\ \epsilon_{k_7k_8}} \end{aligned} \tag{321}$$

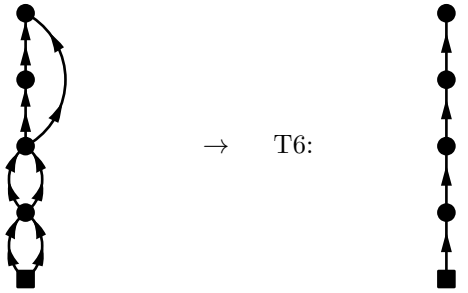
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{322}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4}_{k_1k_2} \\ a_2 &= \epsilon^{k_5k_6k_7}_{k_3} \\ a_3 &= \epsilon^{k_8}_{k_4k_5k_6} \\ a_4 &= \epsilon_{k_7k_8} \end{aligned}$$

Diagram 155:

$$\begin{aligned} \mathrm{PO4.155} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{22}_{k_5k_6k_3k_4} \Omega^{11}_{k_7k_5} \Omega^{02}_{k_7k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{22}_{k_5k_6k_3k_4} \Omega^{11}_{k_7k_5} \Omega^{02}_{k_7k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_6k_7}} \end{aligned} \tag{323}$$

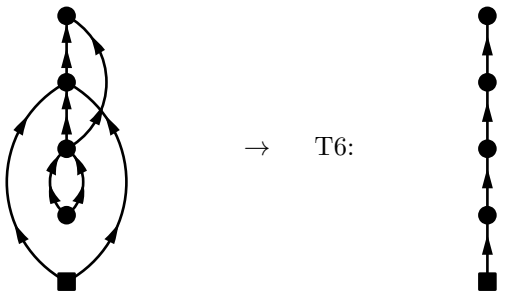


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{324}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4}_{k_1k_2} \\ a_2 &= \epsilon^{k_5k_6}_{k_3k_4} \\ a_3 &= \epsilon^{k_7}_{k_5} \\ a_4 &= \epsilon_{k_6k_7} \end{aligned}$$

Diagram 156:

$$\begin{aligned} \mathrm{PO4.156} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{20}_{k_3k_4} \Omega^{22}_{k_5k_6k_3k_4} \Omega^{13}_{k_7k_5k_1k_2} \Omega^{02}_{k_7k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{20}_{k_3k_4} \Omega^{22}_{k_5k_6k_3k_4} \Omega^{13}_{k_7k_5k_1k_2} \Omega^{02}_{k_7k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_6k_7}} \end{aligned} \tag{325}$$

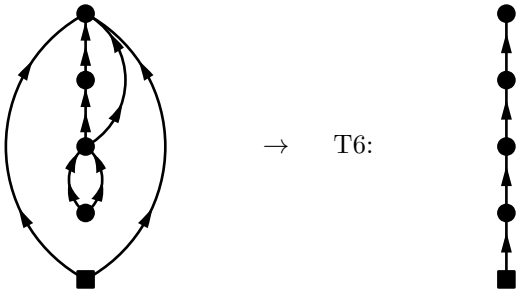


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{326}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4} \\
a_2 &= \epsilon^{k_5k_6}_{k_3k_4} \\
a_3 &= \epsilon^{k_7}_{k_1k_2k_5} \\
a_4 &= \epsilon_{k_6k_7}
\end{aligned}
$$

Diagram 157:

$$
\begin{aligned}
\text{PO4.157} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_4}\Omega^{11}_{k_7k_5}\Omega^{04}_{k_7k_6k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon} \\
&= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_4}\Omega^{11}_{k_7k_5}\Omega^{04}_{k_7k_6k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2}\ \epsilon_{k_5k_1k_2k_6}\ \epsilon_{k_1k_2k_6k_7}} \qquad (327)
\end{aligned}
$$

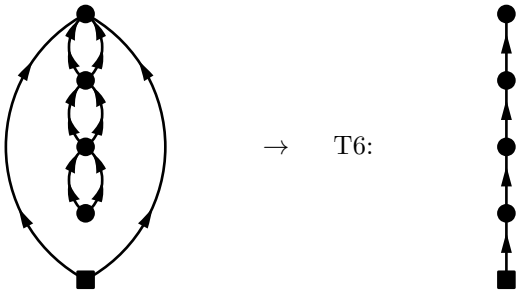


$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \qquad (328)
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4} \\
a_2 &= \epsilon^{k_5k_6}_{k_3k_4} \\
a_3 &= \epsilon^{k_7}_{k_5} \\
a_4 &= \epsilon_{k_1k_2k_6k_7}
\end{aligned}
$$

Diagram 158:

$$
\begin{aligned}
\text{PO4.158} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_4}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{04}_{k_7k_8k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e^{-} \\
&= \frac{(-1)^4}{(2!)^4} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_4}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{04}_{k_7k_8k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2}\ \epsilon_{k_5k_6k_1k_2}\ \epsilon_{k_1k_2k_7k_8}} \qquad (329)
\end{aligned}
$$



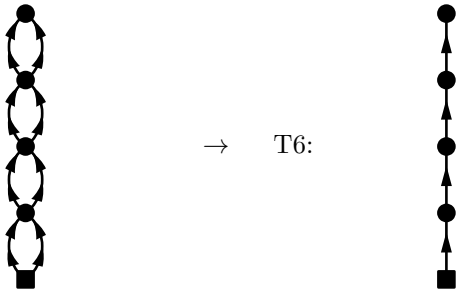
$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \qquad (330)
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4} \\
a_2 &= \epsilon^{k_5k_6}_{k_3k_4} \\
a_3 &= \epsilon^{k_7k_8}_{k_5k_6} \\
a_4 &= \epsilon_{k_1k_2k_7k_8}
\end{aligned}
$$

Diagram 159:

$$\text{PO4.159} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{22}_{k_5k_6k_3k_4} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{02}_{k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_3k_4}_{k_1k_2}} e^{-}$$

$$= \frac{(-1)^4}{(2!)^4} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{22}_{k_5k_6k_3k_4} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_7k_8}} \tag{331}$$



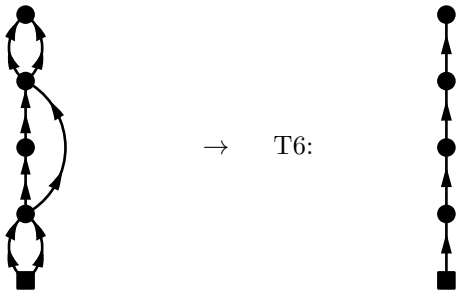
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{332}$$

$$a_1 = \epsilon^{k_3k_4}_{k_1k_2}$$
$$a_2 = \epsilon^{k_5k_6}_{k_3k_4}$$
$$a_3 = \epsilon^{k_7k_8}_{k_5k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 160:

$$\text{PO4.160} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{11}_{k_5k_3} \Omega^{22}_{k_6k_7k_5k_4} \Omega^{02}_{k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{11}_{k_5k_3} \Omega^{22}_{k_6k_7k_5k_4} \Omega^{02}_{k_6k_7}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_4k_5}\ \epsilon_{k_6k_7}} \tag{333}$$



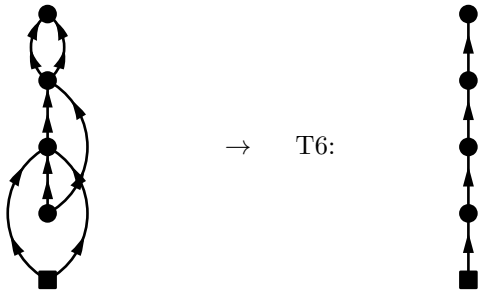
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{334}$$

$$a_1 = \epsilon^{k_3k_4}_{k_1k_2}$$
$$a_2 = \epsilon^{k_5}_{k_3}$$
$$a_3 = \epsilon^{k_6k_7}_{k_4k_5}$$
$$a_4 = \epsilon_{k_6k_7}$$

Diagram 161:

$$\text{PO4.161} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{20}_{k_3k_4} \Omega^{13}_{k_5k_3k_1k_2} \Omega^{22}_{k_6k_7k_5k_4} \Omega^{02}_{k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{20}_{k_3k_4} \Omega^{13}_{k_5k_3k_1k_2} \Omega^{22}_{k_6k_7k_5k_4} \Omega^{02}_{k_6k_7}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_5}\ \epsilon_{k_6k_7}} \tag{335}$$



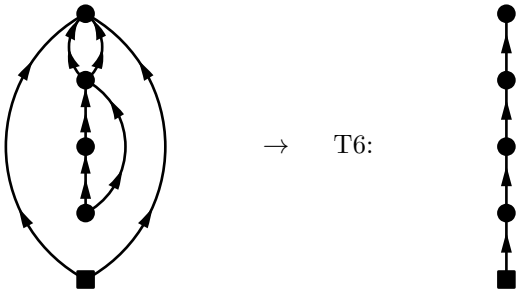
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{336}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5}_{k_1k_2k_3} \\ a_3 &= \epsilon^{k_6k_7}_{k_4k_5} \\ a_4 &= \epsilon_{k_6k_7} \end{aligned}$$

Diagram 162:

$$\begin{aligned} \text{PO4.162} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{20}_{k_3k_4} \Omega^{11}_{k_5k_3} \Omega^{22}_{k_6k_7k_5k_4} \Omega^{04}_{k_6k_7k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{20}_{k_3k_4} \Omega^{11}_{k_5k_3} \Omega^{22}_{k_6k_7k_5k_4} \Omega^{04}_{k_6k_7k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2}\ \epsilon_{k_4k_5k_1k_2}\ \epsilon_{k_1k_2k_6k_7}} \end{aligned} \tag{337}$$



$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{338}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5}_{k_3} \\ a_3 &= \epsilon^{k_6k_7}_{k_4k_5} \\ a_4 &= \epsilon_{k_1k_2k_6k_7} \end{aligned}$$

Diagram 163:

$$\begin{aligned} \text{PO4.163} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_6k_3} \Omega^{02}_{k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{22}_{k_3k_4k_1k_2} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_6k_3} \Omega^{02}_{k_7k_4} \left[\frac{1}{\epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_5k_6k_4}\ \epsilon_{k_4k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_3k_5k_6k_4}\ \epsilon_{k_4k_7}} \right] \end{aligned} \tag{339}$$

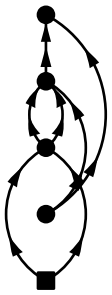
$\rightarrow$ T13:

$$\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{340}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4}_{k_1k_2} \\ a_2 &= \epsilon^{k_5k_6} \\ a_3 &= \epsilon^{k_7}_{k_3k_5k_6} \\ a_4 &= \epsilon_{k_4k_7} \end{aligned}$$

Diagram 164:

$$\begin{aligned} \text{PO4.164} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{13}_{k_7k_5k_6k_3}\Omega^{02}_{k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{13}_{k_7k_5k_6k_3}\Omega^{02}_{k_7k_4} \left[\frac{1}{\epsilon_{k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_5k_6k_4}\ \epsilon_{k_4k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_6k_4}\ \epsilon_{k_4k_7}}\right] \end{aligned} \tag{341}$$



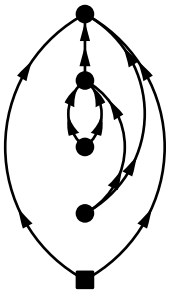
$\rightarrow$ T13:

$$\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{342}$$

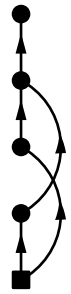
$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_3 &= \epsilon^{k_7}_{k_3k_5k_6} \\ a_4 &= \epsilon_{k_4k_7} \end{aligned}$$

Diagram 165:

$$\begin{aligned} \text{PO4.165} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{13}_{k_7k_5k_6k_3}\Omega^{04}_{k_7k_4k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{13}_{k_7k_5k_6k_3}\Omega^{04}_{k_7k_4k_1k_2} \left[\frac{1}{\epsilon_{k_5k_6k_1k_2}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_5k_6k_1k_2k_4}\ \epsilon_{k_1k_2k_4k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_3k_5k_6k_1k}}\right. \end{aligned} \tag{343}$$



$\rightarrow$ T13:

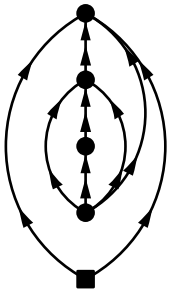


$$\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{344}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3 k_4} \\ a_2 &= \epsilon^{k_5 k_6} \\ a_3 &= \epsilon^{k_7}_{k_3 k_5 k_6} \\ a_4 &= \epsilon_{k_1 k_2 k_4 k_7} \end{aligned}$$

Diagram 166:

$$\begin{aligned} \text{PO4.166} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{11}_{k_7k_3} \Omega^{13}_{k_8k_7k_4k_5} \Omega^{04}_{k_8k_6k_1k_2} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{11}_{k_7k_3} \Omega^{13}_{k_8k_7k_4k_5} \Omega^{04}_{k_8k_6k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_1k_2k_6}\ \epsilon_{k_4k_5k_7k_1k_2k_6}\ \epsilon_{k_1k_2k_6k_8}} \end{aligned} \tag{345}$$



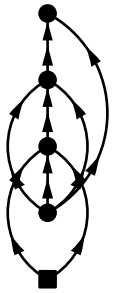
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{346}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3 k_4 k_5 k_6} \\ a_2 &= \epsilon^{k_7}_{k_3} \\ a_3 &= \epsilon^{k_8}_{k_4 k_5 k_7} \\ a_4 &= \epsilon_{k_1 k_2 k_6 k_8} \end{aligned}$$

Diagram 167:

$$\begin{aligned} \text{PO4.167} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{13}_{k_7k_3k_1k_2} \Omega^{13}_{k_8k_7k_4k_5} \Omega^{02}_{k_8k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{13}_{k_7k_3k_1k_2} \Omega^{13}_{k_8k_7k_4k_5} \Omega^{02}_{k_8k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4k_5k_6}\ \epsilon_{k_4k_5k_7k_6}\ \epsilon_{k_6k_8}} \end{aligned} \tag{347}$$



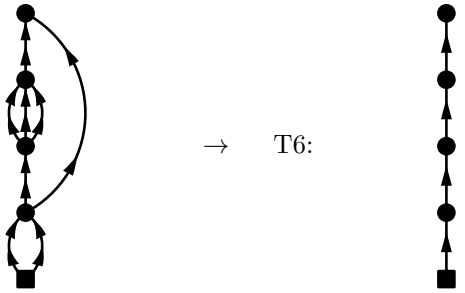
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{348}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon^{k_7}_{k_1k_2k_3} \\ a_3 &= \epsilon^{k_8}_{k_4k_5k_7} \\ a_4 &= \epsilon_{k_6k_8} \end{aligned}$$

Diagram 168:

$$\begin{aligned} \mathrm{PO4.168} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_5k_6k_7}\Omega^{02}_{k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) \\ &= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_5k_6k_7}\Omega^{02}_{k_8k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6k_7k_4}\ \epsilon_{k_4k_8}} \end{aligned} \tag{349}$$



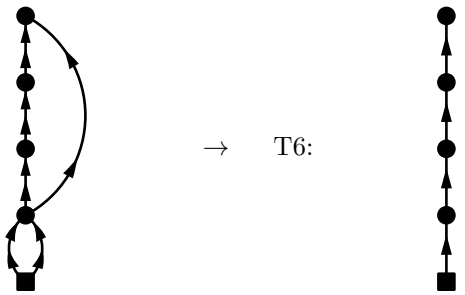
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{350}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4}_{k_1k_2} \\ a_2 &= \epsilon^{k_5k_6k_7}_{k_3} \\ a_3 &= \epsilon^{k_8}_{k_5k_6k_7} \\ a_4 &= \epsilon_{k_4k_8} \end{aligned}$$

Diagram 169:

$$\begin{aligned} \mathrm{PO4.169} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{11}_{k_5k_3}\Omega^{11}_{k_6k_5}\Omega^{02}_{k_6k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}_{k_1k_2}} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{11}_{k_5k_3}\Omega^{11}_{k_6k_5}\Omega^{02}_{k_6k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_4}\ \epsilon_{k_4k_6}} \end{aligned} \tag{351}$$



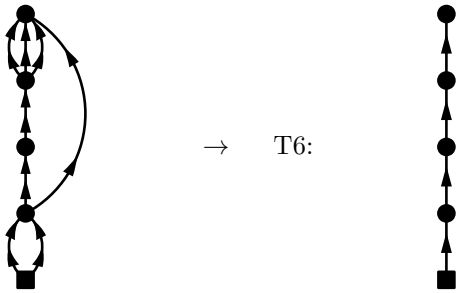
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{352}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4}_{k_1k_2}\\
a_2 &= \epsilon^{k_5}_{k_3}\\
a_3 &= \epsilon^{k_6}_{k_5}\\
a_4 &= \epsilon_{k_4k_6}
\end{aligned}
$$

Diagram 170:

$$
\begin{aligned}
\text{PO4.170} &= \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)(3!)}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{11}_{k_5k_3}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{04}_{k_6k_7k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)\\
&= \frac{(-1)^4}{(2!)(3!)}\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{11}_{k_5k_3}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{04}_{k_6k_7k_8k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_4}\ \epsilon_{k_4k_6k_7k_8}} \qquad (353)
\end{aligned}
$$

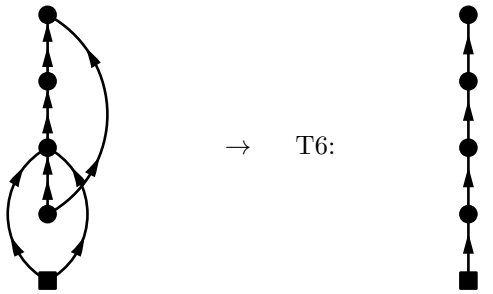


$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \qquad (354)
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4}_{k_1k_2}\\
a_2 &= \epsilon^{k_5}_{k_3}\\
a_3 &= \epsilon^{k_6k_7k_8}_{k_5}\\
a_4 &= \epsilon_{k_4k_6k_7k_8}
\end{aligned}
$$

Diagram 171:

$$
\begin{aligned}
\text{PO4.171} &= \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{13}_{k_5k_3k_1k_2}\Omega^{11}_{k_6k_5}\Omega^{02}_{k_6k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}\\
&= \frac{(-1)^4}{(2!)}\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{13}_{k_5k_3k_1k_2}\Omega^{11}_{k_6k_5}\Omega^{02}_{k_6k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_4}\ \epsilon_{k_4k_6}} \qquad (355)
\end{aligned}
$$



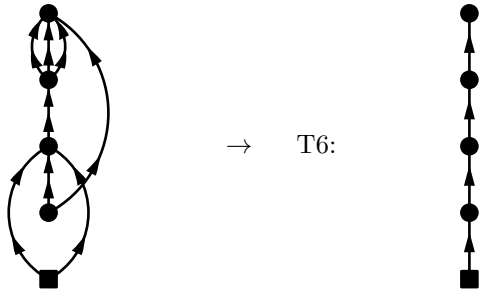
$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \qquad (356)
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4}\\
a_2 &= \epsilon^{k_5}_{k_1k_2k_3}\\
a_3 &= \epsilon^{k_6}_{k_5}\\
a_4 &= \epsilon_{k_4k_6}
\end{aligned}
$$

Diagram 172:

$$\text{PO4.172} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{13}_{k_5k_3k_1k_2}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{04}_{k_6k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{13}_{k_5k_3k_1k_2}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{04}_{k_6k_7k_8k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_4}\ \epsilon_{k_4k_6k_7k_8}} \tag{357}$$



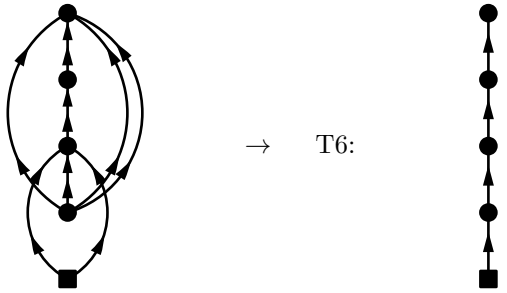
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{358}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5}_{k_1k_2k_3}$$
$$a_3 = \epsilon^{k_6k_7k_8}_{k_5}$$
$$a_4 = \epsilon_{k_4k_6k_7k_8}$$

Diagram 173:

$$\text{PO4.173} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_1k_2}\Omega^{11}_{k_8k_7}\Omega^{04}_{k_8k_4k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_1k_2}\Omega^{11}_{k_8k_7}\Omega^{04}_{k_8k_4k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4k_5k_6}\ \epsilon_{k_7k_4k_5k_6}\ \epsilon_{k_4k_5k_6k_8}} \tag{359}$$



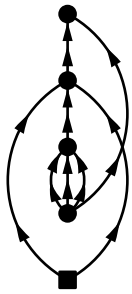
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{360}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1k_2k_3}$$
$$a_3 = \epsilon^{k_8}_{k_7}$$
$$a_4 = \epsilon_{k_4k_5k_6k_8}$$

Diagram 174:

$$\text{PO4.174} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_5}\Omega^{13}_{k_8k_7k_1k_2}\Omega^{02}_{k_8k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_5}\Omega^{13}_{k_8k_7k_1k_2}\Omega^{02}_{k_8k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_1k_2k_6}\ \epsilon_{k_1k_2k_7k_6}\ \epsilon_{k_6k_8}} \tag{361}$$



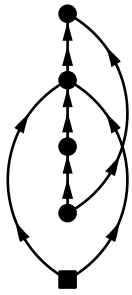
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{362}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_3k_4k_5}$$
$$a_3 = \epsilon^{k_8}_{k_1k_2k_7}$$
$$a_4 = \epsilon_{k_6k_8}$$

Diagram 175:

$$\text{PO4.175} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{11}_{k_5k_3}\Omega^{13}_{k_6k_5k_1k_2}\Omega^{02}_{k_6k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}$$
$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{11}_{k_5k_3}\Omega^{13}_{k_6k_5k_1k_2}\Omega^{02}_{k_6k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_1k_2k_5k_4}\ \epsilon_{k_4k_6}} \tag{363}$$



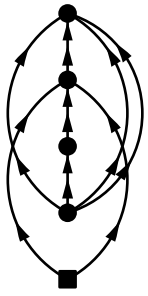
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{364}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5}_{k_3}$$
$$a_3 = \epsilon^{k_6}_{k_1k_2k_5}$$
$$a_4 = \epsilon_{k_4k_6}$$

Diagram 176:

$$\text{PO4.176} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{11}_{k_7k_3}\Omega^{13}_{k_8k_7k_1k_2}\Omega^{04}_{k_8k_4k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)$$
$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{11}_{k_7k_3}\Omega^{13}_{k_8k_7k_1k_2}\Omega^{04}_{k_8k_4k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4k_5k_6}\ \epsilon_{k_1k_2k_7k_4k_5k_6}\ \epsilon_{k_4k_5k_6k_8}} \tag{365}$$



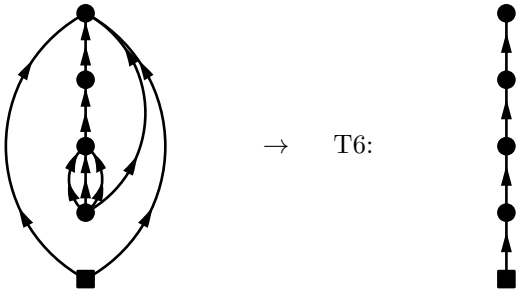
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{366}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon^{k_7}_{k_3} \\ a_3 &= \epsilon^{k_8}_{k_1k_2k_7} \\ a_4 &= \epsilon_{k_4k_5k_6k_8} \end{aligned}$$

Diagram 177:

$$\begin{aligned} \mathrm{PO4.177} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{13}_{k_7k_3k_4k_5} \Omega^{11}_{k_8k_7} \Omega^{04}_{k_8k_6k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) \\ &= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{13}_{k_7k_3k_4k_5} \Omega^{11}_{k_8k_7} \Omega^{04}_{k_8k_6k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_1k_2k_6}\ \epsilon_{k_7k_1k_2k_6}\ \epsilon_{k_1k_2k_6k_8}} \end{aligned} \tag{367}$$

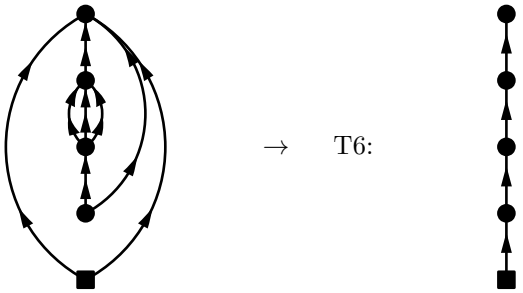


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{368}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon^{k_7}_{k_3k_4k_5} \\ a_3 &= \epsilon^{k_8}_{k_7} \\ a_4 &= \epsilon_{k_1k_2k_6k_8} \end{aligned}$$

Diagram 178:

$$\begin{aligned} \mathrm{PO4.178} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{20}_{k_3k_4} \Omega^{31}_{k_5k_6k_7k_3} \Omega^{13}_{k_8k_5k_6k_7} \Omega^{04}_{k_8k_4k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) \\ &= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{20}_{k_3k_4} \Omega^{31}_{k_5k_6k_7k_3} \Omega^{13}_{k_8k_5k_6k_7} \Omega^{04}_{k_8k_4k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_5k_6k_7k_1k_2k_4}\ \epsilon_{k_1k_2k_4k_8}} \end{aligned} \tag{369}$$

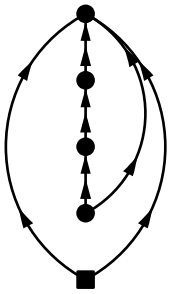


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{370}$$

$$a_1 = \epsilon^{k_3 k_4}$$
$$a_2 = \epsilon^{k_5 k_6 k_7}_{k_3}$$
$$a_3 = \epsilon^{k_8}_{k_5 k_6 k_7}$$
$$a_4 = \epsilon_{k_1 k_2 k_4 k_8}$$

Diagram 179:

$$\text{PO4.179} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{11}_{k_5 k_3} \Omega^{11}_{k_6 k_5} \Omega^{04}_{k_6 k_4 k_1 k_2} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3 k_4}}$$
$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{11}_{k_5 k_3} \Omega^{11}_{k_6 k_5} \Omega^{04}_{k_6 k_4 k_1 k_2}}{\epsilon_{k_1 k_2}\ \epsilon_{k_3 k_1 k_2 k_4}\ \epsilon_{k_5 k_1 k_2 k_4}\ \epsilon_{k_1 k_2 k_4 k_6}} \tag{371}$$



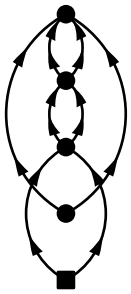
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{372}$$

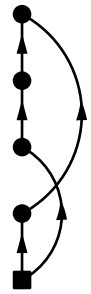
$$a_1 = \epsilon^{k_3 k_4}$$
$$a_2 = \epsilon^{k_5}_{k_3}$$
$$a_3 = \epsilon^{k_6}_{k_5}$$
$$a_4 = \epsilon_{k_1 k_2 k_4 k_6}$$

Diagram 180:

$$\text{PO4.180} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_6} \Omega^{04}_{k_7 k_8 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3 k_4}} e^{-}$$
$$= \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_6} \Omega^{04}_{k_7 k_8 k_3 k_4} \left[\frac{1}{\epsilon_{k_7 k_8}\ \epsilon_{k_1 k_2}\ \epsilon_{k_5 k_6}\ \epsilon_{k_3 k_4 k_7 k_8}} + \frac{1}{\epsilon_{k_5 k_6}\ \epsilon_{k_1 k_2}\ \epsilon_{k_5 k_6 k_3 k_4}\ \epsilon_{k_3 k_4 k_7 k_8}} + \right. \tag{373}$$



$\rightarrow$ T12:



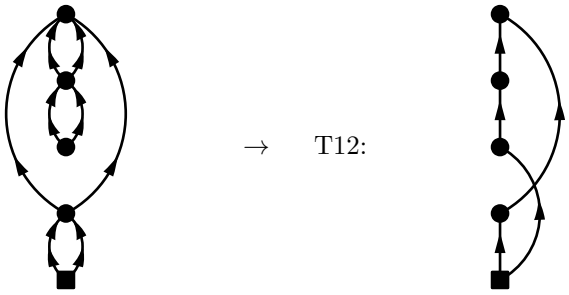
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{374}$$

$$a_1 = \epsilon^{k_3 k_4}$$
$$a_2 = \epsilon^{k_5 k_6}_{k_1 k_2}$$
$$a_3 = \epsilon^{k_7 k_8}_{k_5 k_6}$$
$$a_4 = \epsilon_{k_3 k_4 k_7 k_8}$$

Diagram 181:

$$\text{PO4.181} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{20}_{k_5k_6}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{04}_{k_7k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}_{k_1k_2}}e^{-}$$

$$= \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{22}_{k_3k_4k_1k_2}\Omega^{20}_{k_5k_6}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{04}_{k_7k_8k_3k_4} \left[\frac{1}{\epsilon_{k_1k_2k_7k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_3k_4k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_6k_3k_4}} \right. \tag{375}$$



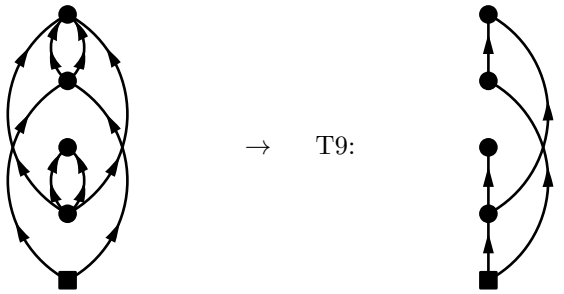
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{376}$$

$$a_1 = \epsilon^{k_3k_4}_{k_1k_2}$$
$$a_2 = \epsilon^{k_5k_6}$$
$$a_3 = \epsilon^{k_7k_8}_{k_5k_6}$$
$$a_4 = \epsilon_{k_3k_4k_7k_8}$$

Diagram 182:

$$\text{PO4.182} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{22}_{k_7k_8k_1k_2}\Omega^{04}_{k_7k_8k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5k}}$$

$$= \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{22}_{k_7k_8k_1k_2}\Omega^{04}_{k_7k_8k_5k_6} \left[\frac{1}{\epsilon_{k_7k_8}\ \epsilon_{k_3k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_5k_6k_7k_8}} \right] \tag{377}$$



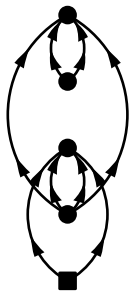
$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{378}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_3k_4}$$
$$a_3 = \epsilon^{k_7k_8}_{k_1k_2}$$
$$a_4 = \epsilon_{k_5k_6k_7k_8}$$

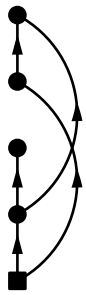
Diagram 183:

$$\mathrm{PO4.183} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_1k_2}\Omega^{20}_{k_7k_8}\Omega^{04}_{k_7k_8k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5k}}$$

$$= \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_1k_2}\Omega^{20}_{k_7k_8}\Omega^{04}_{k_7k_8k_5k_6} \left[\frac{1}{\epsilon_{k_1k_2k_7k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_5k}} \right. \tag{379}$$



$\rightarrow$ T9:



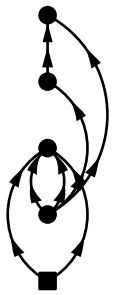
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{380}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_1k_2k_3k_4}$$
$$a_3 = \epsilon^{k_7k_8}$$
$$a_4 = \epsilon_{k_5k_6k_7k_8}$$

Diagram 184:

$$\mathrm{PO4.184} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_1k_2}\Omega^{11}_{k_7k_5}\Omega^{02}_{k_7k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_1k_2}\Omega^{11}_{k_7k_5}\Omega^{02}_{k_7k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_6k_7}} \tag{381}$$



$\rightarrow$ T5:

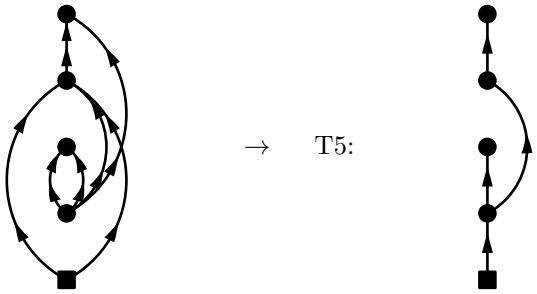
$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{382}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_1k_2k_3k_4}$$
$$a_3 = \epsilon^{k_7}_{k_5}$$
$$a_4 = \epsilon_{k_6k_7}$$

Diagram 185:

$$\mathrm{PO4.185} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{13}_{k_7k_5k_1k_2}\Omega^{02}_{k_7k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{13}_{k_7k_5k_1k_2}\Omega^{02}_{k_7k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_6k_7}} \tag{383}$$

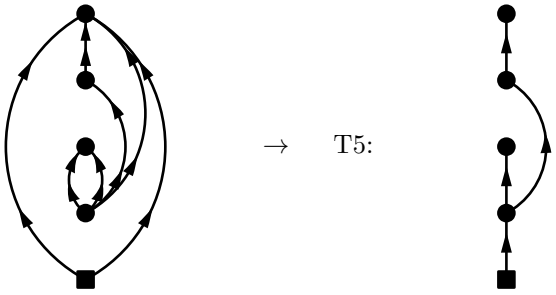


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{384}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon_{k_3k_4} \\ a_3 &= \epsilon^{k_7}_{k_1k_2k_5} \\ a_4 &= \epsilon_{k_6k_7} \end{aligned}$$

Diagram 186:

$$\begin{aligned} \text{PO4.186} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{11}_{k_7k_5}\Omega^{04}_{k_7k_6k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{11}_{k_7k_5}\Omega^{04}_{k_7k_6k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_1k_2k_6}\ \epsilon_{k_1k_2k_6k_7}} \end{aligned} \tag{385}$$

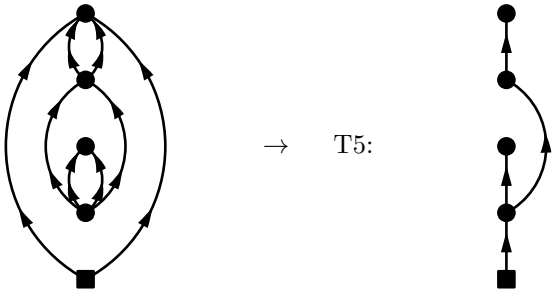


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{386}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon_{k_3k_4} \\ a_3 &= \epsilon^{k_7}_{k_5} \\ a_4 &= \epsilon_{k_1k_2k_6k_7} \end{aligned}$$

Diagram 187:

$$\begin{aligned} \text{PO4.187} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{04}_{k_7k_8k_1k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5k}} \\ &= \frac{(-1)^4}{(2!)^4} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{04}_{k_7k_8k_1k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6k_1k_2}\ \epsilon_{k_1k_2k_7k_8}} \end{aligned} \tag{387}$$

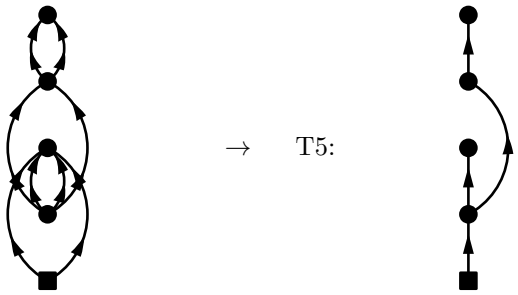


$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{388}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_3k_4}$$
$$a_3 = \epsilon^{k_7k_8}_{k_5k_6}$$
$$a_4 = \epsilon_{k_1k_2k_7k_8}$$

Diagram 188:

$$\mathrm{PO4.188} = \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^4}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_1k_2}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{02}_{k_7k_8}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5k}}$$
$$= \frac{(-1)^4}{(2!)^4}\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_1k_2}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_7k_8}} \tag{389}$$



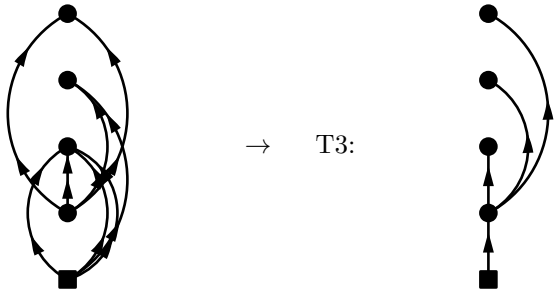
$\rightarrow$ T5:

$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{390}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_1k_2k_3k_4}$$
$$a_3 = \epsilon^{k_7k_8}_{k_5k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 189:

$$\mathrm{PO4.189} = \lim_{\tau\to\infty}\frac{-(-1)^4}{(2!)(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{02}_{k_6k_4}\Omega^{02}_{k_7k_8}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)e^{-\tau_1\epsilon^{k_5k_6k}}$$
$$= \frac{-(-1)^4}{(2!)(3!)}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{02}_{k_6k_4}\Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_4k_6}\ \epsilon_{k_7k_8}} \tag{391}$$



$\rightarrow$ T3:

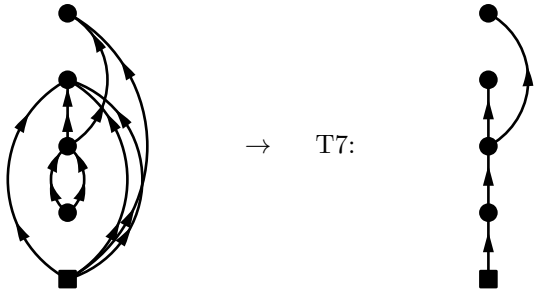
$$\mathrm{T3} = \frac{1}{(a_1+a_2+a_3+a_4)a_2a_3a_4} \tag{392}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_2k_3k_5}$$
$$a_3 = \epsilon_{k_4k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 190:

$$\text{PO4.190} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{04}_{k_7k_1k_2k_3}\Omega^{02}_{k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon^{k_5k_6}}\epsilon$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{04}_{k_7k_1k_2k_3}\Omega^{02}_{k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_7}\ \epsilon_{k_4k_8}} \tag{393}$$



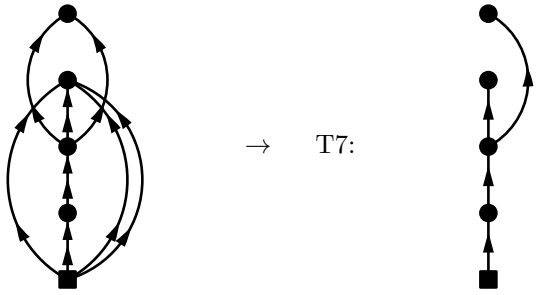
$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{394}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_5k_6}$$
$$a_3 = \epsilon_{k_1k_2k_3k_7}$$
$$a_4 = \epsilon_{k_4k_8}$$

Diagram 191:

$$\text{PO4.191} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{04}_{k_6k_2k_3k_4}\Omega^{02}_{k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon^{k_5}_{k_1}}e^{-\tau}$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{04}_{k_6k_2k_3k_4}\Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_6}\ \epsilon_{k_7k_8}} \tag{395}$$



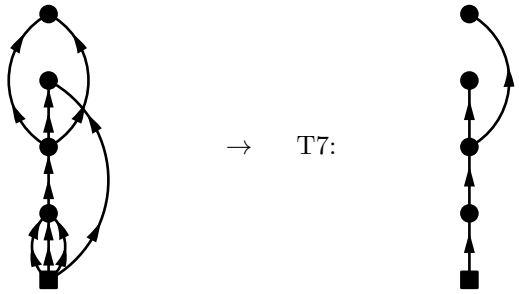
$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{396}$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7k_8}_{k_5}$$
$$a_3 = \epsilon_{k_2k_3k_4k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 192:

$$\text{PO4.192} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{02}_{k_6k_4}\Omega^{02}_{k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon^{k_5}_{k_1k_2k_3}}$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{02}_{k_6k_4}\Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_4}\ \epsilon_{k_4k_6}\ \epsilon_{k_7k_8}} \tag{397}$$

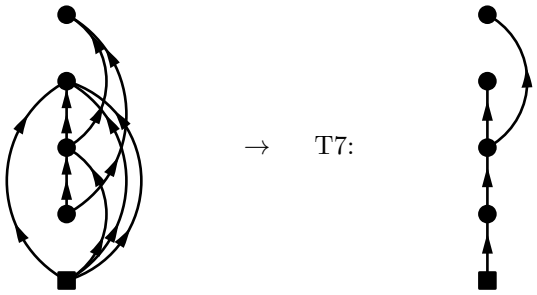


$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{398}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\ a_2 &= \epsilon^{k_6k_7k_8}_{k_5} \\ a_3 &= \epsilon_{k_4k_6} \\ a_4 &= \epsilon_{k_7k_8} \end{aligned}$$

Diagram 193:

$$\begin{aligned} \text{PO4.193} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{22}_{k_7k_8k_5k_1}\Omega^{04}_{k_7k_2k_3k_4}\Omega^{02}_{k_8k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) \\ &= \frac{-(-1)^4}{(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{22}_{k_7k_8k_5k_1}\Omega^{04}_{k_7k_2k_3k_4}\Omega^{02}_{k_8k_6}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_2k_3k_4k_6}\ \epsilon_{k_2k_3k_4k_7}\ \epsilon_{k_6k_8}} \end{aligned} \tag{399}$$

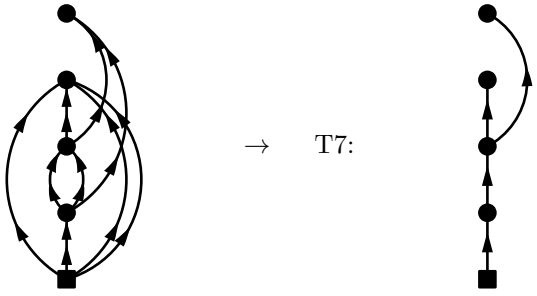


$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{400}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6} \\ a_2 &= \epsilon^{k_7k_8}_{k_1k_5} \\ a_3 &= \epsilon_{k_2k_3k_4k_7} \\ a_4 &= \epsilon_{k_6k_8} \end{aligned}$$

Diagram 194:

$$\begin{aligned} \text{PO4.194} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_5k_6}\Omega^{04}_{k_8k_2k_3k_4}\Omega^{02}_{k_9k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{22}_{k_8k_9k_5k_6}\Omega^{04}_{k_8k_2k_3k_4}\Omega^{02}_{k_9k_7}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_2k_3k_4k_7}\ \epsilon_{k_2k_3k_4k_8}\ \epsilon_{k_7k_9}} \end{aligned} \tag{401}$$

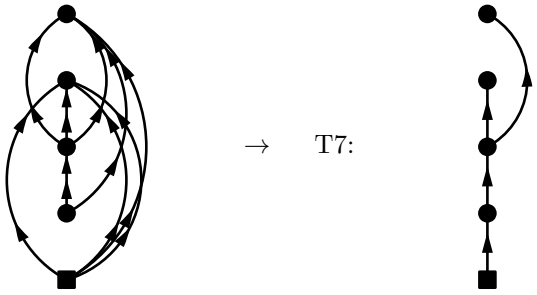


$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{402}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8k_9}_{k_5k_6} \\ a_3 &= \epsilon_{k_2k_3k_4k_8} \\ a_4 &= \epsilon_{k_7k_9} \end{aligned}$$

Diagram 195:

$$\begin{aligned} \mathrm{PO4.195} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{31}_{k_7k_8k_9k_5}\Omega^{04}_{k_7k_1k_2k_3}\Omega^{04}_{k_8k_9k_6k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{31}_{k_7k_8k_9k_5}\Omega^{04}_{k_7k_1k_2k_3}\Omega^{04}_{k_8k_9k_6k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_1k_2k_3k_4k_6}\ \epsilon_{k_1k_2k_3k_7}\ \epsilon_{k_4k_6k_8k_9}} \end{aligned} \tag{403}$$

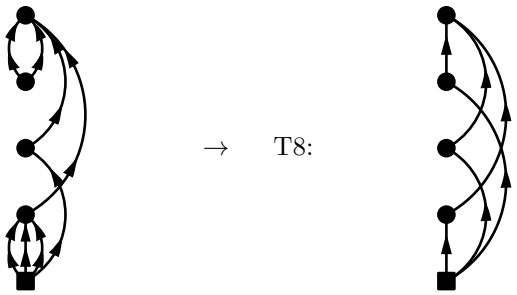


$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{404}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6} \\ a_2 &= \epsilon^{k_7k_8k_9}_{k_5} \\ a_3 &= \epsilon_{k_1k_2k_3k_7} \\ a_4 &= \epsilon_{k_4k_6k_8k_9} \end{aligned}$$

Diagram 196:

$$\begin{aligned} \mathrm{PO4.196} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{11}_{k_6k_4}\Omega^{20}_{k_7k_8}\Omega^{04}_{k_7k_8k_6k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1k_2k} \\ &= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{11}_{k_6k_4}\Omega^{20}_{k_7k_8}\Omega^{04}_{k_7k_8k_6k_5}\left[\frac{1}{\epsilon_{k_1k_2k_3k_4k_7k_8}\ \epsilon_{k_4k_5k_7k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_7k_8}} + \frac{}{\epsilon_{k_1k_2k_3k_6k_7k_8}\ \epsilon_{k}}\right. \end{aligned} \tag{405}$$

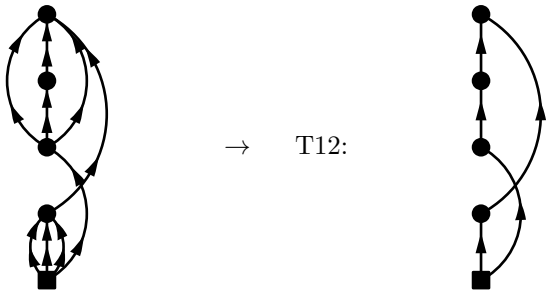


$$\mathrm{T8} = \frac{1}{(a_1+a_2+a_4)(a_2+a_4)(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_4)(a_2+a_1+a_4)(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_4)(a_2+a_1+a_3+} \tag{406}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\
a_2 &= \epsilon^{k_6}_{k_4} \\
a_3 &= \epsilon^{k_7k_8} \\
a_4 &= \epsilon_{k_5k_6k_7k_8}
\end{aligned}
$$

Diagram 197:

$$
\begin{aligned}
\text{PO4.197} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{31}_{k_6k_7k_8k_4} \Omega^{11}_{k_9k_6} \Omega^{04}_{k_9k_7k_8k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4- \\
&= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{31}_{k_6k_7k_8k_4} \Omega^{11}_{k_9k_6} \Omega^{04}_{k_9k_7k_8k_5} \left[\frac{1}{\epsilon_{k_1k_2k_3k_7k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_6k_7k_8}\ \epsilon_{k_5k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_3k} \right.
\end{aligned}
\tag{407}
$$

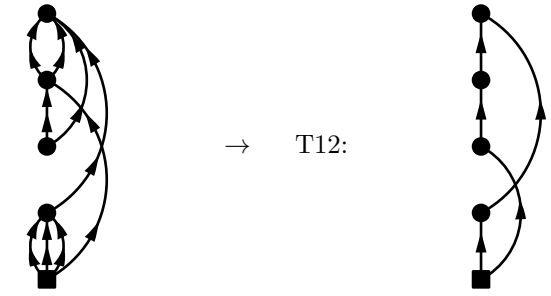


$$
\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2}
\tag{408}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\
a_2 &= \epsilon^{k_6k_7k_8}_{k_4} \\
a_3 &= \epsilon^{k_9}_{k_6} \\
a_4 &= \epsilon_{k_5k_7k_8k_9}
\end{aligned}
$$

Diagram 198:

$$
\begin{aligned}
\text{PO4.198} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{20}_{k_6k_7} \Omega^{22}_{k_8k_9k_6k_4} \Omega^{04}_{k_8k_9k_7k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4- \\
&= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{20}_{k_6k_7} \Omega^{22}_{k_8k_9k_6k_4} \Omega^{04}_{k_8k_9k_7k_5} \left[\frac{1}{\epsilon_{k_1k_2k_3k_7k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_4k_6k_7}\ \epsilon_{k_5k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_4} \right.
\end{aligned}
\tag{409}
$$

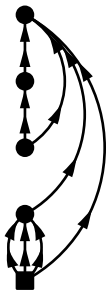


$$
\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2}
\tag{410}
$$

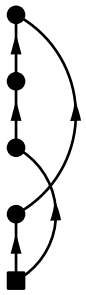
$$
\begin{aligned}
a_1 &= \epsilon^{k_5}_{k_1k_2k_3}\\
a_2 &= \epsilon^{k_6k_7}\\
a_3 &= \epsilon^{k_8k_9}_{k_4k_6}\\
a_4 &= \epsilon_{k_5k_7k_8k_9}
\end{aligned}
$$

Diagram 199:

$$
\begin{aligned}
\text{PO4.199} &= \lim_{\tau\to\infty}\frac{(-1)^4}{(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{20}_{k_6k_7}\Omega^{11}_{k_8k_6}\Omega^{04}_{k_8k_7k_5k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e\\
&= \frac{(-1)^4}{(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{20}_{k_6k_7}\Omega^{11}_{k_8k_6}\Omega^{04}_{k_8k_7k_5k_4}\left[\frac{1}{\epsilon_{k_1k_2k_3k_4k_7k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_6k_4k_7}\ \epsilon_{k_4k_5k_7k_8}}+\frac{}{\epsilon_{k_1k_2k_3k_6k_4k_7}}\right.
\end{aligned}
\tag{411}
$$



$\rightarrow$ T12:

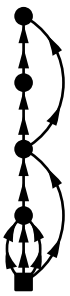


$$
\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4}+\frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4}+\frac{1}{(a_1+a_2+a_3+a_4)(a_2}
\tag{412}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5}_{k_1k_2k_3}\\
a_2 &= \epsilon^{k_6k_7}\\
a_3 &= \epsilon^{k_8}_{k_6}\\
a_4 &= \epsilon_{k_4k_5k_7k_8}
\end{aligned}
$$

Diagram 200:

$$
\begin{aligned}
\text{PO4.200} &= \lim_{\tau\to\infty}\frac{(-1)^4}{(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{22}_{k_6k_7k_5k_4}\Omega^{11}_{k_8k_6}\Omega^{02}_{k_8k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e\\
&= \frac{(-1)^4}{(3!)}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{22}_{k_6k_7k_5k_4}\Omega^{11}_{k_8k_6}\Omega^{02}_{k_8k_7}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_5}\ \epsilon_{k_6k_7}\ \epsilon_{k_7k_8}}
\end{aligned}
\tag{413}
$$



$\rightarrow$ T6:

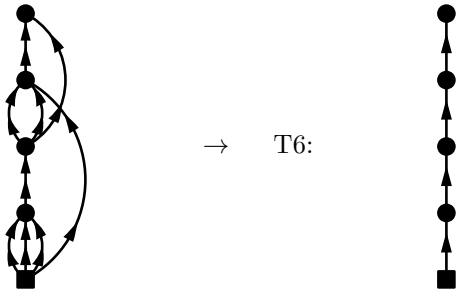
$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4}
\tag{414}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5}_{k_1k_2k_3}\\
a_2 &= \epsilon^{k_6k_7}_{k_4k_5}\\
a_3 &= \epsilon^{k_8}_{k_6}\\
a_4 &= \epsilon_{k_7k_8}
\end{aligned}
$$

Diagram 201:

$$\text{PO4.201} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{13}_{k_9k_6k_7k_4}\Omega^{02}_{k_9k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{13}_{k_9k_6k_7k_4}\Omega^{02}_{k_9k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_4}\ \epsilon_{k_4k_6k_7k_8}\ \epsilon_{k_8k_9}} \tag{415}$$



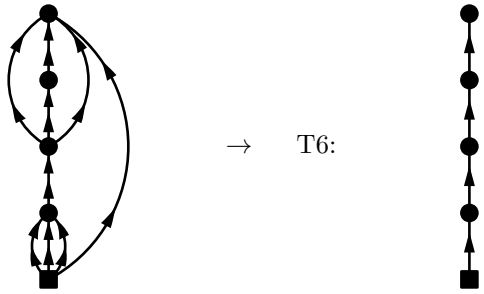
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{416}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\ a_2 &= \epsilon^{k_6k_7k_8}_{k_5} \\ a_3 &= \epsilon^{k_9}_{k_4k_6k_7} \\ a_4 &= \epsilon_{k_8k_9} \end{aligned}$$

Diagram 202:

$$\text{PO4.202} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{11}_{k_9k_6}\Omega^{04}_{k_9k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{11}_{k_9k_6}\Omega^{04}_{k_9k_7k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_4}\ \epsilon_{k_6k_4k_7k_8}\ \epsilon_{k_4k_7k_8k_9}} \tag{417}$$



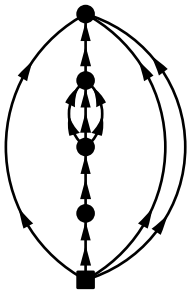
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{418}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\ a_2 &= \epsilon^{k_6k_7k_8}_{k_5} \\ a_3 &= \epsilon^{k_9}_{k_6} \\ a_4 &= \epsilon_{k_4k_7k_8k_9} \end{aligned}$$

Diagram 203:

$$\text{PO4.203} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{13}_{k_9k_6k_7k_8}\Omega^{04}_{k_9k_2k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1}}\epsilon$$

$$= \frac{(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{13}_{k_9k_6k_7k_8}\Omega^{04}_{k_9k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_2k_3k_4}\ \epsilon_{k_6k_7k_8k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_9}} \tag{419}$$



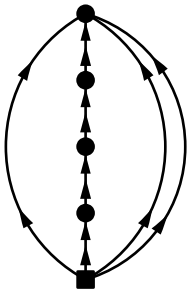
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{420}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6 k_7 k_8}_{k_5} \\ a_3 &= \epsilon^{k_9}_{k_6 k_7 k_8} \\ a_4 &= \epsilon_{k_2 k_3 k_4 k_9} \end{aligned}$$

Diagram 204:

$$\begin{aligned} \mathrm{PO4.204} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{11}_{k_6 k_5} \Omega^{11}_{k_7 k_6} \Omega^{04}_{k_7 k_2 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1}} e^{-\tau_2 \epsilon^{k_6}_{k_5}} e \\ &= \frac{(-1)^4}{(3!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{11}_{k_6 k_5} \Omega^{11}_{k_7 k_6} \Omega^{04}_{k_7 k_2 k_3 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_2 k_3 k_4}\ \epsilon_{k_6 k_2 k_3 k_4}\ \epsilon_{k_2 k_3 k_4 k_7}} \end{aligned} \tag{421}$$



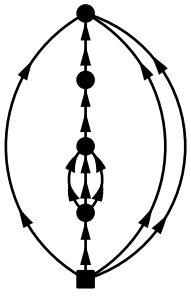
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{422}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6}_{k_5} \\ a_3 &= \epsilon^{k_7}_{k_6} \\ a_4 &= \epsilon_{k_2 k_3 k_4 k_7} \end{aligned}$$

Diagram 205:

$$\begin{aligned} \mathrm{PO4.205} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_6 k_7} \Omega^{11}_{k_9 k_8} \Omega^{04}_{k_9 k_2 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k}_{k_1}} \\ &= \frac{(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_6 k_7} \Omega^{11}_{k_9 k_8} \Omega^{04}_{k_9 k_2 k_3 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_6 k_7 k_2 k_3 k_4}\ \epsilon_{k_8 k_2 k_3 k_4}\ \epsilon_{k_2 k_3 k_4 k_9}} \end{aligned} \tag{423}$$



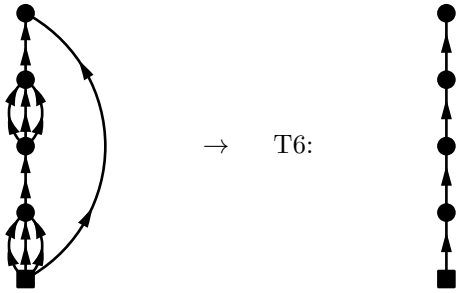
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{424}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_5 k_6 k_7} \\ a_3 &= \epsilon^{k_9}_{k_8} \\ a_4 &= \epsilon_{k_2 k_3 k_4 k_9} \end{aligned}$$

Diagram 206:

$$\begin{aligned} \mathrm{PO4.206} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{13}_{k_5 k_1 k_2 k_3} \Omega^{31}_{k_6 k_7 k_8 k_5} \Omega^{13}_{k_9 k_6 k_7 k_8} \Omega^{02}_{k_9 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1 k} \\ &= \frac{(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{13}_{k_5 k_1 k_2 k_3} \Omega^{31}_{k_6 k_7 k_8 k_5} \Omega^{13}_{k_9 k_6 k_7 k_8} \Omega^{02}_{k_9 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_4}\ \epsilon_{k_6 k_7 k_8 k_4}\ \epsilon_{k_4 k_9}} \end{aligned} \tag{425}$$



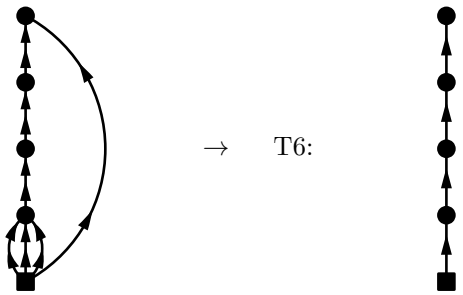
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{426}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1 k_2 k_3} \\ a_2 &= \epsilon^{k_6 k_7 k_8}_{k_5} \\ a_3 &= \epsilon^{k_9}_{k_6 k_7 k_8} \\ a_4 &= \epsilon_{k_4 k_9} \end{aligned}$$

Diagram 207:

$$\begin{aligned} \mathrm{PO4.207} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{13}_{k_5 k_1 k_2 k_3} \Omega^{11}_{k_6 k_5} \Omega^{11}_{k_7 k_6} \Omega^{02}_{k_7 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1 k_2 k_3}} e^{-\tau_2 \\ &= \frac{(-1)^4}{(3!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{13}_{k_5 k_1 k_2 k_3} \Omega^{11}_{k_6 k_5} \Omega^{11}_{k_7 k_6} \Omega^{02}_{k_7 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_4}\ \epsilon_{k_6 k_4}\ \epsilon_{k_4 k_7}} \end{aligned} \tag{427}$$



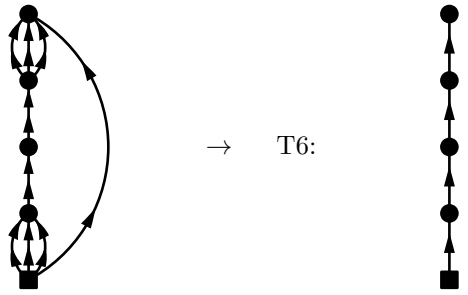
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{428}$$

$$a_1 = \epsilon^{k_5}_{k_1k_2k_3}$$
$$a_2 = \epsilon^{k_6}_{k_5}$$
$$a_3 = \epsilon^{k_7}_{k_6}$$
$$a_4 = \epsilon_{k_4k_7}$$

Diagram 208:

$$\text{PO4.208} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{11}_{k_6k_5} \Omega^{31}_{k_7k_8k_9k_6} \Omega^{04}_{k_7k_8k_9k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1k}}$$
$$= \frac{(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{11}_{k_6k_5} \Omega^{31}_{k_7k_8k_9k_6} \Omega^{04}_{k_7k_8k_9k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_4}\ \epsilon_{k_6k_4}\ \epsilon_{k_4k_7k_8k_9}} \tag{429}$$

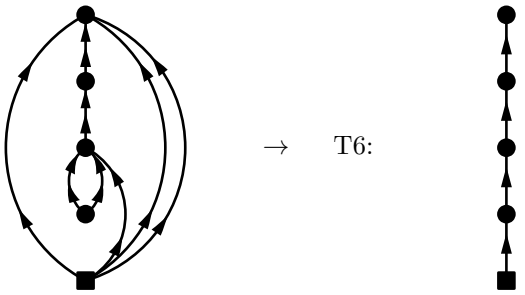


$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{430}$$

$$a_1 = \epsilon^{k_5}_{k_1k_2k_3}$$
$$a_2 = \epsilon^{k_6}_{k_5}$$
$$a_3 = \epsilon^{k_7k_8k_9}_{k_6}$$
$$a_4 = \epsilon_{k_4k_7k_8k_9}$$

Diagram 209:

$$\text{PO4.209} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_6k_1} \Omega^{11}_{k_8k_7} \Omega^{04}_{k_8k_2k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}}e$$
$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_6k_1} \Omega^{11}_{k_8k_7} \Omega^{04}_{k_8k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_2k_3k_4}\ \epsilon_{k_7k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_8}} \tag{431}$$



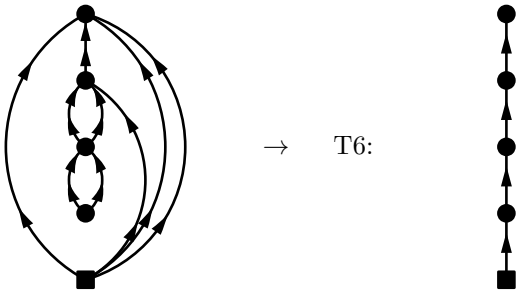
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{432}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1k_5k_6}$$
$$a_3 = \epsilon^{k_8}_{k_7}$$
$$a_4 = \epsilon_{k_2k_3k_4k_8}$$

Diagram 210:

$$\text{PO4.210} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{13}_{k_9k_7k_8k_1} \Omega^{04}_{k_9k_2k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{13}_{k_9k_7k_8k_1} \Omega^{04}_{k_9k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_1k_2k_3k_4}\ \epsilon_{k_1k_7k_8k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_9}} \tag{433}$$



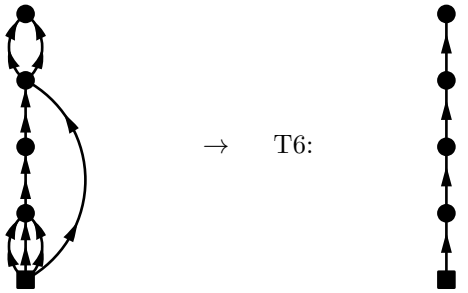
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{434}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6} \\ a_2 &= \epsilon^{k_7k_8}_{k_5k_6} \\ a_3 &= \epsilon^{k_9}_{k_1k_7k_8} \\ a_4 &= \epsilon_{k_2k_3k_4k_9} \end{aligned}$$

Diagram 211:

$$\text{PO4.211} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{11}_{k_6k_5} \Omega^{22}_{k_7k_8k_6k_4} \Omega^{02}_{k_7k_8} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5}_{k_1k_2k_3}}$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{11}_{k_6k_5} \Omega^{22}_{k_7k_8k_6k_4} \Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_4}\ \epsilon_{k_4k_6}\ \epsilon_{k_7k_8}} \tag{435}$$



$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{436}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\ a_2 &= \epsilon^{k_6}_{k_5} \\ a_3 &= \epsilon^{k_7k_8}_{k_4k_6} \\ a_4 &= \epsilon_{k_7k_8} \end{aligned}$$

Diagram 212:

$$\text{PO4.212} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{22}_{k_6k_7k_5k_4} \Omega^{22}_{k_8k_9k_6k_7} \Omega^{02}_{k_8k_9} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{13}_{k_5k_1k_2k_3} \Omega^{22}_{k_6k_7k_5k_4} \Omega^{22}_{k_8k_9k_6k_7} \Omega^{02}_{k_8k_9}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_5}\ \epsilon_{k_6k_7}\ \epsilon_{k_8k_9}} \tag{437}$$

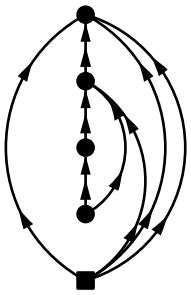
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{438}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\ a_2 &= \epsilon^{k_6k_7}_{k_4k_5} \\ a_3 &= \epsilon^{k_8k_9}_{k_6k_7} \\ a_4 &= \epsilon_{k_8k_9} \end{aligned}$$

Diagram 213:

$$\begin{aligned} \mathrm{PO4.213} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{11}_{k_7k_5} \Omega^{13}_{k_8k_7k_6k_1} \Omega^{04}_{k_8k_2k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{\cdot} \\ &= \frac{(-1)^4}{(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{11}_{k_7k_5} \Omega^{13}_{k_8k_7k_6k_1} \Omega^{04}_{k_8k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_1k_6k_2k_3k_4}\ \epsilon_{k_1k_6k_7k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_8}} \end{aligned} \tag{439}$$



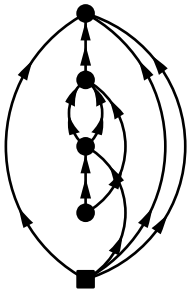
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{440}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6} \\ a_2 &= \epsilon^{k_7}_{k_5} \\ a_3 &= \epsilon^{k_8}_{k_1k_6k_7} \\ a_4 &= \epsilon_{k_2k_3k_4k_8} \end{aligned}$$

Diagram 214:

$$\begin{aligned} \mathrm{PO4.214} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_5k_1} \Omega^{13}_{k_9k_7k_8k_6} \Omega^{04}_{k_9k_2k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_5k_1} \Omega^{13}_{k_9k_7k_8k_6} \Omega^{04}_{k_9k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_2k_3k_4}\ \epsilon_{k_6k_7k_8k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_9}} \end{aligned} \tag{441}$$



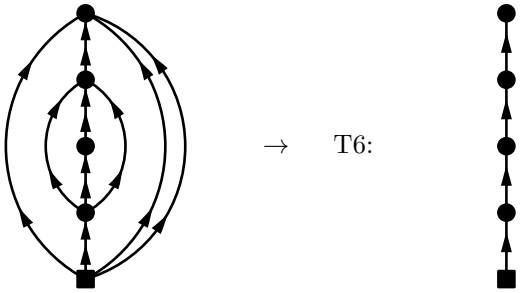
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{442}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6} \\ a_2 &= \epsilon^{k_7 k_8}_{k_1 k_5} \\ a_3 &= \epsilon^{k_9}_{k_6 k_7 k_8} \\ a_4 &= \epsilon_{k_2 k_3 k_4 k_9} \end{aligned}$$

Diagram 215:

$$\begin{aligned} \mathrm{PO4.215} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{11}_{k_8 k_5} \Omega^{13}_{k_9 k_8 k_6 k_7} \Omega^{04}_{k_9 k_2 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{11}_{k_8 k_5} \Omega^{13}_{k_9 k_8 k_6 k_7} \Omega^{04}_{k_9 k_2 k_3 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_6 k_7 k_2 k_3 k_4}\ \epsilon_{k_6 k_7 k_8 k_2 k_3 k_4}\ \epsilon_{k_2 k_3 k_4 k_9}} \end{aligned} \tag{443}$$



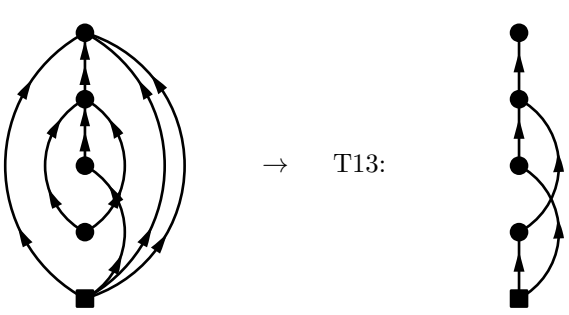
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{444}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_5} \\ a_3 &= \epsilon^{k_9}_{k_6 k_7 k_8} \\ a_4 &= \epsilon_{k_2 k_3 k_4 k_9} \end{aligned}$$

Diagram 216:

$$\begin{aligned} \mathrm{PO4.216} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{11}_{k_7 k_1} \Omega^{13}_{k_8 k_7 k_5 k_6} \Omega^{04}_{k_8 k_2 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k_6}} e \\ &= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{11}_{k_7 k_1} \Omega^{13}_{k_8 k_7 k_5 k_6} \Omega^{04}_{k_8 k_2 k_3 k_4} \left[\frac{1}{\epsilon_{k_7 k_2 k_3 k_4}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_6 k_7 k_2 k_3 k_4}\ \epsilon_{k_2 k_3 k_4 k_8}} + \frac{}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_5 k_6}} \right. \end{aligned} \tag{445}$$



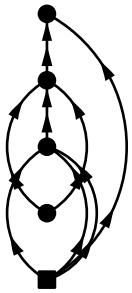
$\rightarrow$ T13:

$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{446}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6} \\
a_2 &= \epsilon^{k_7}_{k_1} \\
a_3 &= \epsilon^{k_8}_{k_5 k_6 k_7} \\
a_4 &= \epsilon_{k_2 k_3 k_4 k_8}
\end{aligned}
$$

Diagram 217:

$$
\begin{aligned}
\text{PO4.217} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_1 k_2 k_3} \Omega^{13}_{k_8 k_7 k_5 k_6} \Omega^{02}_{k_8 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k_6}} e \\
&= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_1 k_2 k_3} \Omega^{13}_{k_8 k_7 k_5 k_6} \Omega^{02}_{k_8 k_4} \left[\frac{1}{\epsilon_{k_7 k_4}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_6 k_7 k_4}\ \epsilon_{k_4 k_8}} + \frac{1}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_2 k_3 k_5 k_6 k_4}\ \epsilon_{k_5 k_6}} \right.
\end{aligned}
\tag{447}
$$



$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{448}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6} \\
a_2 &= \epsilon^{k_7}_{k_1 k_2 k_3} \\
a_3 &= \epsilon^{k_8}_{k_5 k_6 k_7} \\
a_4 &= \epsilon_{k_4 k_8}
\end{aligned}
$$

Diagram 218:

$$
\begin{aligned}
\text{PO4.218} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{13}_{k_5 k_1 k_2 k_3} \Omega^{11}_{k_6 k_4} \Omega^{22}_{k_7 k_8 k_6 k_5} \Omega^{02}_{k_7 k_8} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1 k_2 k}} \\
&= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{13}_{k_5 k_1 k_2 k_3} \Omega^{11}_{k_6 k_4} \Omega^{22}_{k_7 k_8 k_6 k_5} \Omega^{02}_{k_7 k_8} \left[\frac{1}{\epsilon_{k_1 k_2 k_3 k_6}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_6}\ \epsilon_{k_7 k_8}} + \frac{1}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_4 k_5}\ \epsilon_{k_5 k_6}\ \epsilon_{k_7 k_8}} \right.
\end{aligned}
\tag{449}
$$

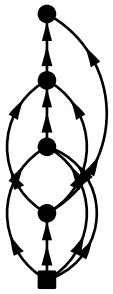
$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{450}
$$

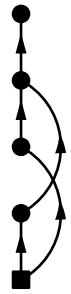
$$
\begin{aligned}
a_1 &= \epsilon^{k_5}_{k_1k_2k_3} \\
a_2 &= \epsilon^{k_6}_{k_4} \\
a_3 &= \epsilon^{k_7k_8}_{k_5k_6} \\
a_4 &= \epsilon_{k_7k_8}
\end{aligned}
$$

Diagram 219:

$$
\begin{aligned}
\text{PO4.219} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_2k_3k_4} \Omega^{13}_{k_9k_8k_5k_6} \Omega^{02}_{k_9k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\
&= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_2k_3k_4} \Omega^{13}_{k_9k_8k_5k_6} \Omega^{02}_{k_9k_7} \left[\frac{1}{\epsilon_{k_1k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_8k_7}\ \epsilon_{k_7k_9}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_5k_6k_7}\ } \right.
\end{aligned}
\tag{451}
$$



$\rightarrow$ T13:

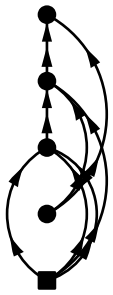


$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{452}
$$

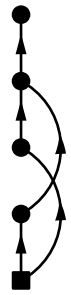
$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\
a_2 &= \epsilon^{k_8}_{k_2k_3k_4} \\
a_3 &= \epsilon^{k_9}_{k_5k_6k_8} \\
a_4 &= \epsilon_{k_7k_9}
\end{aligned}
$$

Diagram 220:

$$
\begin{aligned}
\text{PO4.220} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_1k_2k_3} \Omega^{13}_{k_8k_7k_5k_4} \Omega^{02}_{k_8k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) \\
&= \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_1k_2k_3} \Omega^{13}_{k_8k_7k_5k_4} \Omega^{02}_{k_8k_6} \left[\frac{1}{\epsilon_{k_4k_7}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_5k_7k_6}\ \epsilon_{k_6k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_4k_5k_6}\ \epsilon_{k_4k_5}} \right.
\end{aligned}
\tag{453}
$$



$\rightarrow$ T13:

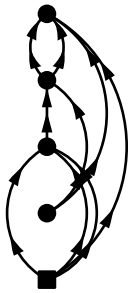


$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{454}
$$

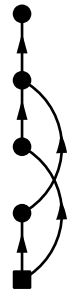
$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6} \\
a_2 &= \epsilon^{k_7}_{k_1 k_2 k_3} \\
a_3 &= \epsilon^{k_8}_{k_4 k_5 k_7} \\
a_4 &= \epsilon_{k_6 k_8}
\end{aligned}
$$

Diagram 221:

$$
\begin{aligned}
\mathrm{PO4.221} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_1 k_2 k_3} \Omega^{22}_{k_8 k_9 k_7 k_5} \Omega^{04}_{k_8 k_9 k_6 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\
&= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_1 k_2 k_3} \Omega^{22}_{k_8 k_9 k_7 k_5} \Omega^{04}_{k_8 k_9 k_6 k_4} \left[\frac{1}{\epsilon_{k_7 k_4}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_7 k_4 k_6}\ \epsilon_{k_4 k_6 k_8 k_9}} + \frac{}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_2 k_3 k_5 k_4}} \right.
\end{aligned}
\tag{455}
$$



$\rightarrow$ T13:

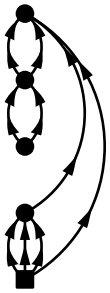


$$
\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{456}
$$

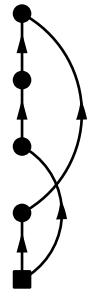
$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6} \\
a_2 &= \epsilon^{k_7}_{k_1 k_2 k_3} \\
a_3 &= \epsilon^{k_8 k_9}_{k_5 k_7} \\
a_4 &= \epsilon_{k_4 k_6 k_8 k_9}
\end{aligned}
$$

Diagram 222:

$$
\begin{aligned}
\mathrm{PO4.222} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{13}_{k_5 k_1 k_2 k_3} \Omega^{20}_{k_6 k_7} \Omega^{22}_{k_8 k_9 k_6 k_7} \Omega^{04}_{k_8 k_9 k_5 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon} \\
&= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{13}_{k_5 k_1 k_2 k_3} \Omega^{20}_{k_6 k_7} \Omega^{22}_{k_8 k_9 k_6 k_7} \Omega^{04}_{k_8 k_9 k_5 k_4} \left[\frac{1}{\epsilon_{k_1 k_2 k_3 k_4 k_8 k_9}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_2 k_3 k_6 k_7 k_4}\ \epsilon_{k_4 k_5 k_8 k_9}} + \frac{}{\epsilon_{k_1 k_2 k_3}} \right.
\end{aligned}
\tag{457}
$$



$\rightarrow$ T12:

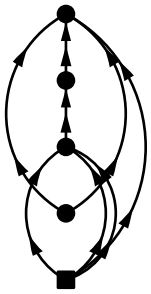


$$
\mathrm{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{458}
$$

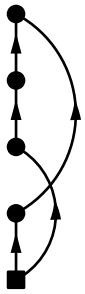
$$
\begin{aligned}
a_1 &= \epsilon^{k_5}_{k_1k_2k_3}\\
a_2 &= \epsilon^{k_6k_7}\\
a_3 &= \epsilon^{k_8k_9}_{k_6k_7}\\
a_4 &= \epsilon_{k_4k_5k_8k_9}
\end{aligned}
$$

Diagram 223:

$$
\begin{aligned}
\text{PO4.223} &= \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{13}_{k_7k_1k_2k_3}\Omega^{11}_{k_8k_7}\Omega^{04}_{k_8k_5k_6k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}}e\\
&= \frac{(-1)^4}{(2!)(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{13}_{k_7k_1k_2k_3}\Omega^{11}_{k_8k_7}\Omega^{04}_{k_8k_5k_6k_4}\left[\frac{1}{\epsilon_{k_4k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_7k_4}\ \epsilon_{k_4k_5k_6k_8}}+\frac{1}{\epsilon_{k_7k_4}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_7k_4k_5k_6}\ \epsilon_{k_4}}\right.
\end{aligned}
\tag{459}
$$



$\rightarrow$ T12:



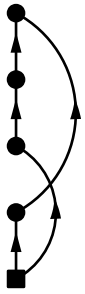
$$
\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4}+\frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4}+\frac{1}{(a_1+a_2+a_3+a_4)(a_2}
\tag{460}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5k_6}\\
a_2 &= \epsilon^{k_7}_{k_1k_2k_3}\\
a_3 &= \epsilon^{k_8}_{k_7}\\
a_4 &= \epsilon_{k_4k_5k_6k_8}
\end{aligned}
$$

Diagram 224:

$$
\begin{aligned}
\text{PO4.224} &= \lim_{\tau\to\infty}\frac{-(-1)^4}{(2!)(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{20}_{k_6k_7}\Omega^{13}_{k_8k_6k_7k_4}\Omega^{02}_{k_8k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1k_2k}}\\
&= \frac{-(-1)^4}{(2!)(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{20}_{k_6k_7}\Omega^{13}_{k_8k_6k_7k_4}\Omega^{02}_{k_8k_5}\left[\frac{1}{\epsilon_{k_1k_2k_3k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_4k_6k_7}\ \epsilon_{k_5k_8}}+\frac{1}{\epsilon_{k_1k_2k_3k_4k_6k_7}\ \epsilon_{k_1k_2k}}\right.
\end{aligned}
\tag{461}
$$

$\rightarrow$ T12:

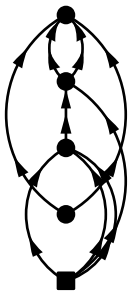


$$
\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4}+\frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4}+\frac{1}{(a_1+a_2+a_3+a_4)(a_2}
\tag{462}
$$

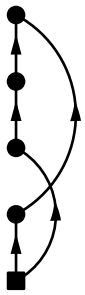
$$a_1 = \epsilon^{k_5}_{k_1k_2k_3}$$
$$a_2 = \epsilon^{k_6k_7}$$
$$a_3 = \epsilon^{k_8}_{k_4k_6k_7}$$
$$a_4 = \epsilon_{k_5k_8}$$

Diagram 225:

$$\text{PO4.225} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{13}_{k_7k_1k_2k_3}\Omega^{22}_{k_8k_9k_7k_4}\Omega^{04}_{k_8k_9k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$
$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{13}_{k_7k_1k_2k_3}\Omega^{22}_{k_8k_9k_7k_4}\Omega^{04}_{k_8k_9k_5k_6} \left[\frac{1}{\epsilon_{k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_7}\ \epsilon_{k_5k_6k_8k_9}} + \frac{1}{\epsilon_{k_4k_7}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_7k_5k}\right.$$
(463)



$\rightarrow$ T12:

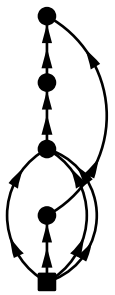


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2}$$
(464)

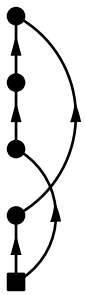
$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1k_2k_3}$$
$$a_3 = \epsilon^{k_8k_9}_{k_4k_7}$$
$$a_4 = \epsilon_{k_5k_6k_8k_9}$$

Diagram 226:

$$\text{PO4.226} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{13}_{k_6k_2k_3k_4}\Omega^{11}_{k_7k_6}\Omega^{02}_{k_7k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1}}e^{-\tau_2\epsilon^{k_6}_{k_2}}$$
$$= \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{13}_{k_6k_2k_3k_4}\Omega^{11}_{k_7k_6}\Omega^{02}_{k_7k_5} \left[\frac{1}{\epsilon_{k_1k_7}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_6}\ \epsilon_{k_5k_7}} + \frac{1}{\epsilon_{k_1k_6}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_6k_5}\ \epsilon_{k_5k_7}} + \frac{}{\epsilon_{k_1k_2}}\right.$$
(465)



$\rightarrow$ T12:

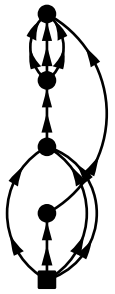


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2}$$
(466)

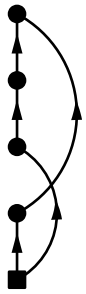
$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6}_{k_2k_3k_4}$$
$$a_3 = \epsilon^{k_7}_{k_6}$$
$$a_4 = \epsilon_{k_5k_7}$$

Diagram 227:

$$\text{PO4.227} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{13}_{k_6k_2k_3k_4} \Omega^{31}_{k_7k_8k_9k_6} \Omega^{04}_{k_7k_8k_9k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k}_{k}}$$
$$= \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{13}_{k_6k_2k_3k_4} \Omega^{31}_{k_7k_8k_9k_6} \Omega^{04}_{k_7k_8k_9k_5} \left[\frac{1}{\epsilon_{k_1k_7k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_6}\ \epsilon_{k_5k_7k_8k_9}} + \frac{1}{\epsilon_{k_1k_6}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_6k_{5}}} \right. \tag{467}$$



$\rightarrow$ T12:

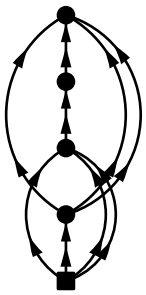


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{468}$$

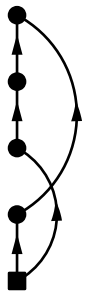
$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6}_{k_2k_3k_4}$$
$$a_3 = \epsilon^{k_7k_8k_9}_{k_6}$$
$$a_4 = \epsilon_{k_5k_7k_8k_9}$$

Diagram 228:

$$\text{PO4.228} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_2k_3k_4} \Omega^{11}_{k_9k_8} \Omega^{04}_{k_9k_5k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k}_{k}}$$
$$= \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_2k_3k_4} \Omega^{11}_{k_9k_8} \Omega^{04}_{k_9k_5k_6k_7} \left[\frac{1}{\epsilon_{k_1k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_8}\ \epsilon_{k_5k_6k_7k_9}} + \frac{1}{\epsilon_{k_1k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_8k_5k_6k_{7}}} \right. \tag{469}$$



$\rightarrow$ T12:



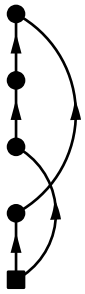
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{470}$$

$$a_1 = \epsilon^{k_5 k_6 k_7}_{k_1}$$
$$a_2 = \epsilon^{k_8}_{k_2 k_3 k_4}$$
$$a_3 = \epsilon^{k_9}_{k_8}$$
$$a_4 = \epsilon_{k_5 k_6 k_7 k_9}$$

Diagram 229:

$$\text{PO4.229} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{13}_{k_5 k_1 k_2 k_3} \Omega^{31}_{k_6 k_7 k_8 k_4} \Omega^{13}_{k_9 k_6 k_7 k_8} \Omega^{02}_{k_9 k_5} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k}_{k}}$$
$$= \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{13}_{k_5 k_1 k_2 k_3} \Omega^{31}_{k_6 k_7 k_8 k_4} \Omega^{13}_{k_9 k_6 k_7 k_8} \Omega^{02}_{k_9 k_5} \left[\frac{1}{\epsilon_{k_1 k_2 k_3 k_9}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_2 k_3 k_6 k_7 k_8}\ \epsilon_{k_5 k_9}} + \frac{}{\epsilon_{k_1 k_2 k_3 k_6 k_7 k_8}\ \epsilon_{k}} \right.$$
(471)

$\rightarrow$ T12:



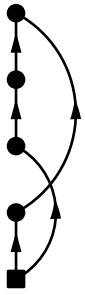
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2}$$
(472)

$$a_1 = \epsilon^{k_5}_{k_1 k_2 k_3}$$
$$a_2 = \epsilon^{k_6 k_7 k_8}_{k_4}$$
$$a_3 = \epsilon^{k_9}_{k_6 k_7 k_8}$$
$$a_4 = \epsilon_{k_5 k_9}$$

Diagram 230:

$$\text{PO4.230} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{13}_{k_5 k_1 k_2 k_3} \Omega^{11}_{k_6 k_4} \Omega^{11}_{k_7 k_6} \Omega^{02}_{k_7 k_5} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1 k_2 k_3}} e^{-}$$
$$= \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{13}_{k_5 k_1 k_2 k_3} \Omega^{11}_{k_6 k_4} \Omega^{11}_{k_7 k_6} \Omega^{02}_{k_7 k_5} \left[\frac{1}{\epsilon_{k_1 k_2 k_3 k_7}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_2 k_3 k_6}\ \epsilon_{k_5 k_7}} + \frac{1}{\epsilon_{k_1 k_2 k_3 k_6}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_6 k_5}\ \epsilon_{k_5}} \right.$$
(473)

$\rightarrow$ T12:

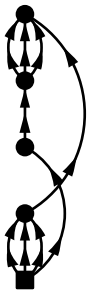


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2}$$
(474)

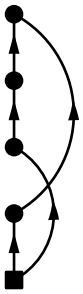
$$a_1 = \epsilon^{k_5}_{k_1k_2k_3}$$
$$a_2 = \epsilon^{k_6}_{k_4}$$
$$a_3 = \epsilon^{k_7}_{k_6}$$
$$a_4 = \epsilon_{k_5k_7}$$

Diagram 231:

$$\text{PO4.231} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{11}_{k_6k_4}\Omega^{31}_{k_7k_8k_9k_6}\Omega^{04}_{k_7k_8k_9k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k}_{k}}$$
$$= \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{13}_{k_5k_1k_2k_3}\Omega^{11}_{k_6k_4}\Omega^{31}_{k_7k_8k_9k_6}\Omega^{04}_{k_7k_8k_9k_5} \left[\frac{1}{\epsilon_{k_1k_2k_3k_7k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_6}\ \epsilon_{k_5k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_6}\ \epsilon_{k}}\right. \tag{475}$$



$\rightarrow$ T12:

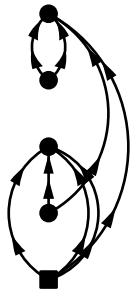


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{476}$$

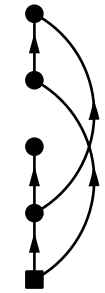
$$a_1 = \epsilon^{k_5}_{k_1k_2k_3}$$
$$a_2 = \epsilon^{k_6}_{k_4}$$
$$a_3 = \epsilon^{k_7k_8k_9}_{k_6}$$
$$a_4 = \epsilon_{k_5k_7k_8k_9}$$

Diagram 232:

$$\text{PO4.232} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{20}_{k_7k_8}\Omega^{04}_{k_7k_8k_6k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}}\epsilon$$
$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{20}_{k_7k_8}\Omega^{04}_{k_7k_8k_6k_4} \left[\frac{1}{\epsilon_{k_1k_2k_3k_4k_7k_8}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_6k_7k_8}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k}}\right. \tag{477}$$



$\rightarrow$ T9:



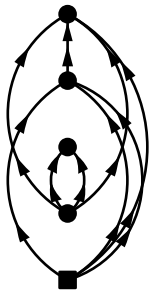
$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{478}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_2k_3k_5}$$
$$a_3 = \epsilon^{k_7k_8}$$
$$a_4 = \epsilon_{k_4k_6k_7k_8}$$

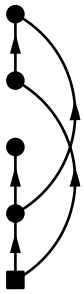
Diagram 233:

$$\text{PO4.233} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{02}_{k_5k_6}\Omega^{13}_{k_9k_1k_2k_3}\Omega^{04}_{k_9k_7k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{02}_{k_5k_6}\Omega^{13}_{k_9k_1k_2k_3}\Omega^{04}_{k_9k_7k_8k_4}\left[\frac{1}{\epsilon_{k_4k_9}\ \epsilon_{k_5k_6}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_7k_8k_9}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_1k_2k_3k}}\right. \tag{479}$$



$\rightarrow$ T9:



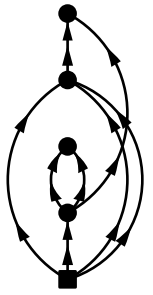
$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{480}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_5k_6}$$
$$a_3 = \epsilon^{k_9}_{k_1k_2k_3}$$
$$a_4 = \epsilon_{k_4k_7k_8k_9}$$

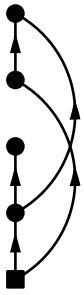
Diagram 234:

$$\text{PO4.234} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{02}_{k_5k_6}\Omega^{13}_{k_8k_2k_3k_4}\Omega^{02}_{k_8k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6k}_{k_1}}$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{02}_{k_5k_6}\Omega^{13}_{k_8k_2k_3k_4}\Omega^{02}_{k_8k_7}\left[\frac{1}{\epsilon_{k_1k_8}\ \epsilon_{k_5k_6}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_2k_3k_4k_7}\ \epsilon_{k_7k_8}}\right. \tag{481}$$



$\rightarrow$ T9:



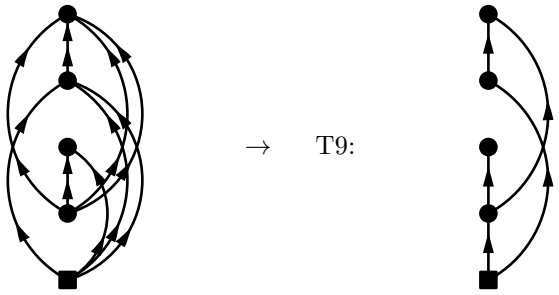
$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{482}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_5k_6}$$
$$a_3 = \epsilon^{k_8}_{k_2k_3k_4}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 235:

$$\mathrm{PO4.235} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{02}_{k_5k_1} \Omega^{13}_{k_9k_2k_3k_4} \Omega^{04}_{k_9k_6k_7k_8} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k}}$$

$$= \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{02}_{k_5k_1} \Omega^{13}_{k_9k_2k_3k_4} \Omega^{04}_{k_9k_6k_7k_8} \left[\frac{1}{\epsilon_{k_1k_9}\ \epsilon_{k_1k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_6k_7k_8k_9}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5}\ \epsilon_{k_2k_3k_4k_6k}} \right. \tag{483}$$



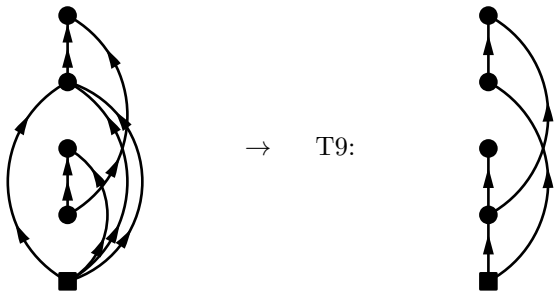
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{484}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_5}$$
$$a_3 = \epsilon^{k_9}_{k_2k_3k_4}$$
$$a_4 = \epsilon_{k_6k_7k_8k_9}$$

Diagram 236:

$$\mathrm{PO4.236} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{02}_{k_5k_1} \Omega^{13}_{k_7k_2k_3k_4} \Omega^{02}_{k_7k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5k_6}} e^{-\tau_2 \epsilon_{k_1}}$$

$$= \frac{(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{02}_{k_5k_1} \Omega^{13}_{k_7k_2k_3k_4} \Omega^{02}_{k_7k_6} \left[\frac{1}{\epsilon_{k_1k_7}\ \epsilon_{k_1k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_6k_7}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5}\ \epsilon_{k_2k_3k_4k_6}\ \epsilon_{k_6k_7}} \right] \tag{485}$$



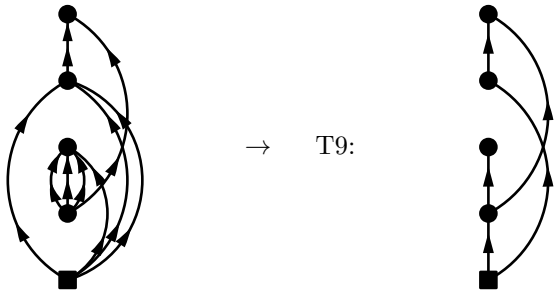
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{486}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_5}$$
$$a_3 = \epsilon^{k_7}_{k_2k_3k_4}$$
$$a_4 = \epsilon_{k_6k_7}$$

Diagram 237:

$$\mathrm{PO4.237} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_7k_1} \Omega^{13}_{k_9k_2k_3k_4} \Omega^{02}_{k_9k_8} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k}}$$

$$= \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_7k_1} \Omega^{13}_{k_9k_2k_3k_4} \Omega^{02}_{k_9k_8} \left[\frac{1}{\epsilon_{k_1k_9}\ \epsilon_{k_1k_5k_6k_7}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_8k_9}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_7}\ \epsilon_{k_2k_3k}} \right. \tag{487}$$



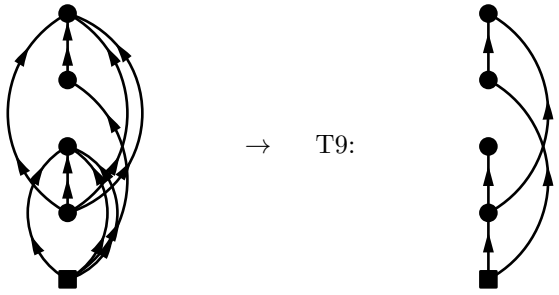
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{488}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_5k_6k_7}$$
$$a_3 = \epsilon^{k_9}_{k_2k_3k_4}$$
$$a_4 = \epsilon_{k_8k_9}$$

Diagram 238:

$$\mathrm{PO4.238} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_1k_2k_3} \Omega^{11}_{k_9k_4} \Omega^{04}_{k_9k_6k_7k_8} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k}}$$

$$= \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_1k_2k_3} \Omega^{11}_{k_9k_4} \Omega^{04}_{k_9k_6k_7k_8} \left[\frac{1}{\epsilon_{k_1k_2k_3k_9}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_6k_7k_8k_9}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k}} \right. \tag{489}$$



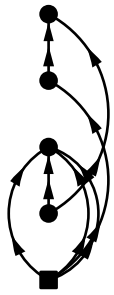
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{490}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_2k_3k_5}$$
$$a_3 = \epsilon^{k_9}_{k_4}$$
$$a_4 = \epsilon_{k_6k_7k_8k_9}$$

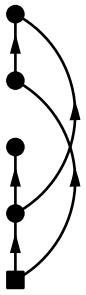
Diagram 239:

$$\mathrm{PO4.239} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{11}_{k_7k_4}\Omega^{02}_{k_7k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}}e^{-\tau_2\epsilon_{k_1}}$$

$$= \frac{(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{11}_{k_7k_4}\Omega^{02}_{k_7k_6} \left[\frac{1}{\epsilon_{k_1k_2k_3k_7}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_6k_7}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_4k_6}\ \epsilon_{k_6k}}\right. \tag{491}$$



$\rightarrow$ T9:



$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{492}$$

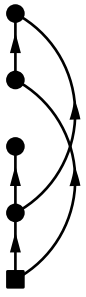
$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_2k_3k_5}$$
$$a_3 = \epsilon^{k_7}_{k_4}$$
$$a_4 = \epsilon_{k_6k_7}$$

Diagram 240:

$$\mathrm{PO4.240} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{31}_{k_7k_8k_9k_4}\Omega^{04}_{k_7k_8k_9k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k}}$$

$$= \frac{(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{31}_{k_7k_8k_9k_4}\Omega^{04}_{k_7k_8k_9k_6} \left[\frac{1}{\epsilon_{k_1k_2k_3k_7k_8k_9}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_6k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k}}\right. \tag{493}$$

$\rightarrow$ T9:



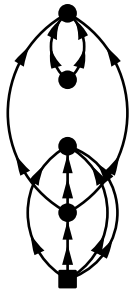
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{494}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_2k_3k_5}$$
$$a_3 = \epsilon^{k_7k_8k_9}_{k_4}$$
$$a_4 = \epsilon_{k_6k_7k_8k_9}$$

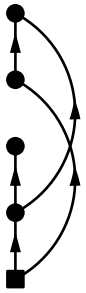
Diagram 241:

$$\text{PO4.241} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_2k_3k_4}\Omega^{20}_{k_8k_9}\Omega^{04}_{k_8k_9k_6k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_2k_3k_4}\Omega^{20}_{k_8k_9}\Omega^{04}_{k_8k_9k_6k_7}\left[\frac{1}{\epsilon_{k_1k_2k_3k_4k_8k_9}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_6k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k}}\right. \tag{495}$$



$\rightarrow$ T9:



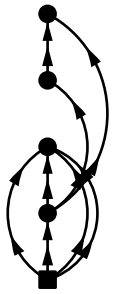
$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{496}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3k_4k_5}$$
$$a_3 = \epsilon^{k_8k_9}$$
$$a_4 = \epsilon_{k_6k_7k_8k_9}$$

Diagram 242:

$$\text{PO4.242} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_2k_3k_4}\Omega^{11}_{k_8k_6}\Omega^{02}_{k_8k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{}$$

$$= \frac{(-1)^4}{(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_2k_3k_4}\Omega^{11}_{k_8k_6}\Omega^{02}_{k_8k_7}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_6k_7}\ \epsilon_{k_7k_8}} \tag{497}$$



$\rightarrow$ T5:

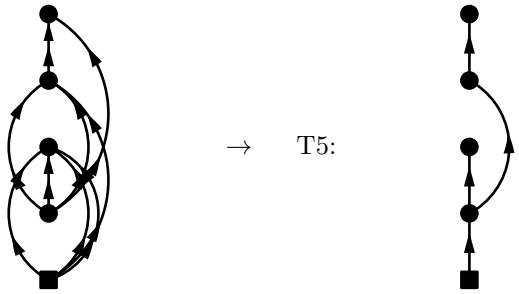
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{498}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3k_4k_5}$$
$$a_3 = \epsilon^{k_8}_{k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 243:

$$\text{PO4.243} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{13}_{k_9k_6k_7k_4}\Omega^{02}_{k_9k_8}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{13}_{k_9k_6k_7k_4}\Omega^{02}_{k_9k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_4k_6k_7k_8}\ \epsilon_{k_8k_9}} \tag{499}$$

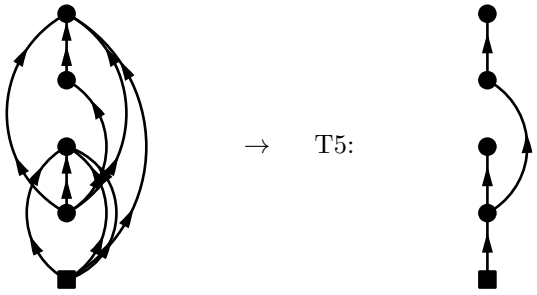


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{500}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon_{k_1k_2k_3k_5} \\ a_3 &= \epsilon^{k_9}_{k_4k_6k_7} \\ a_4 &= \epsilon_{k_8k_9} \end{aligned}$$

Diagram 244:

$$\begin{aligned} \text{PO4.244} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{11}_{k_9k_6}\Omega^{04}_{k_9k_7k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{11}_{k_9k_6}\Omega^{04}_{k_9k_7k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_6k_4k_7k_8}\ \epsilon_{k_4k_7k_8k_9}} \end{aligned} \tag{501}$$

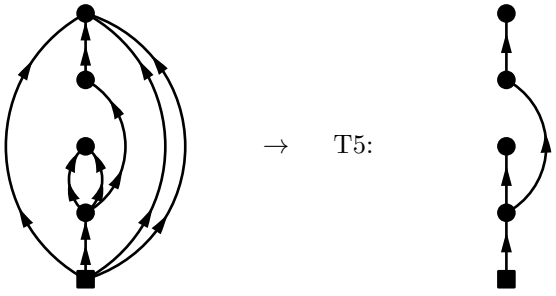


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{502}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon_{k_1k_2k_3k_5} \\ a_3 &= \epsilon^{k_9}_{k_6} \\ a_4 &= \epsilon_{k_4k_7k_8k_9} \end{aligned}$$

Diagram 245:

$$\begin{aligned} \text{PO4.245} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{02}_{k_5k_6}\Omega^{11}_{k_8k_7}\Omega^{04}_{k_8k_2k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6k_7}_{k_1}} \\ &= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{02}_{k_5k_6}\Omega^{11}_{k_8k_7}\Omega^{04}_{k_8k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_7k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_8}} \end{aligned} \tag{503}$$

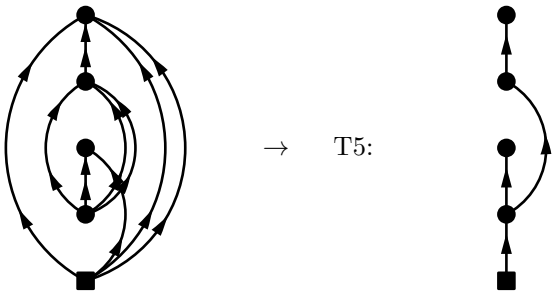


$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{504}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_5k_6}$$
$$a_3 = \epsilon^{k_8}_{k_7}$$
$$a_4 = \epsilon_{k_2k_3k_4k_8}$$

Diagram 246:

$$\mathrm{PO4.246} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{02}_{k_5k_1}\Omega^{13}_{k_9k_6k_7k_8}\Omega^{04}_{k_9k_2k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^k}$$
$$= \frac{-(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{02}_{k_5k_1}\Omega^{13}_{k_9k_6k_7k_8}\Omega^{04}_{k_9k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5}\ \epsilon_{k_6k_7k_8k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_9}} \tag{505}$$

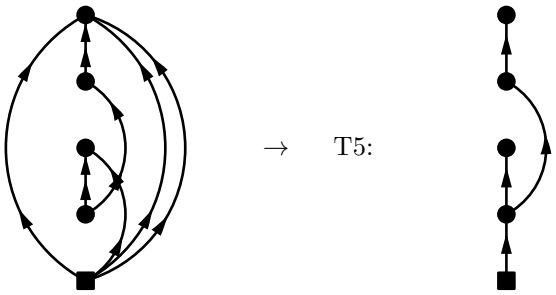


$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{506}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_5}$$
$$a_3 = \epsilon^{k_9}_{k_6k_7k_8}$$
$$a_4 = \epsilon_{k_2k_3k_4k_9}$$

Diagram 247:

$$\mathrm{PO4.247} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_5k_1}\Omega^{11}_{k_7k_6}\Omega^{04}_{k_7k_2k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}}e^{-\tau_2}$$
$$= \frac{-(-1)^4}{(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_5k_1}\Omega^{11}_{k_7k_6}\Omega^{04}_{k_7k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5}\ \epsilon_{k_6k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_7}} \tag{507}$$



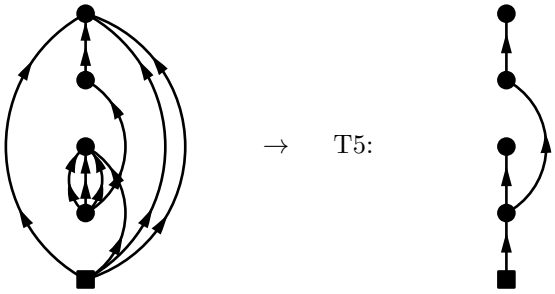
$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{508}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_5}$$
$$a_3 = \epsilon^{k_7}_{k_6}$$
$$a_4 = \epsilon_{k_2k_3k_4k_7}$$

Diagram 248:

$$\text{PO4.248} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_6k_7k_1}\Omega^{11}_{k_9k_8}\Omega^{04}_{k_9k_2k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^k}$$

$$= \frac{-(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_6k_7k_1}\Omega^{11}_{k_9k_8}\Omega^{04}_{k_9k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_7}\ \epsilon_{k_8k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_9}} \tag{509}$$



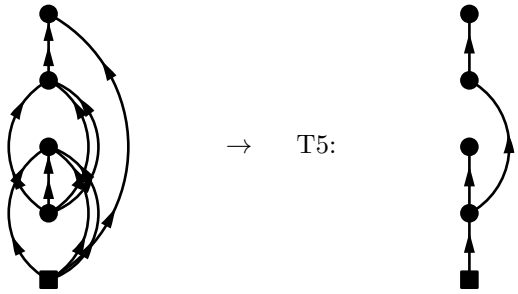
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{510}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_5k_6k_7}$$
$$a_3 = \epsilon^{k_9}_{k_8}$$
$$a_4 = \epsilon_{k_2k_3k_4k_9}$$

Diagram 249:

$$\text{PO4.249} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{13}_{k_9k_6k_7k_8}\Omega^{02}_{k_9k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^k}$$

$$= \frac{-(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{13}_{k_9k_6k_7k_8}\Omega^{02}_{k_9k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_6k_7k_8k_4}\ \epsilon_{k_4k_9}} \tag{511}$$



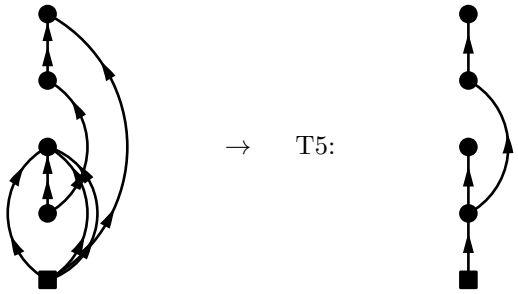
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{512}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_2k_3k_5}$$
$$a_3 = \epsilon^{k_9}_{k_6k_7k_8}$$
$$a_4 = \epsilon_{k_4k_9}$$

Diagram 250:

$$\text{PO4.250} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{11}_{k_7k_6}\Omega^{02}_{k_7k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}}e^{-\tau_2}$$

$$= \frac{-(-1)^4}{(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{11}_{k_7k_6}\Omega^{02}_{k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_6k_4}\ \epsilon_{k_4k_7}} \tag{513}$$

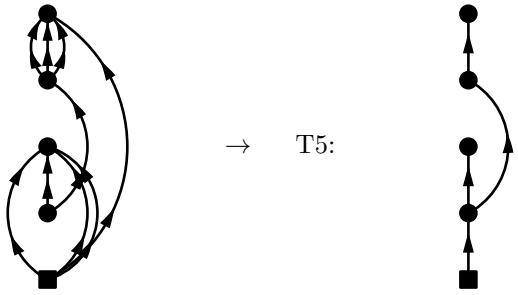


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{514}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6} \\ a_2 &= \epsilon_{k_1k_2k_3k_5} \\ a_3 &= \epsilon^{k_7}_{k_6} \\ a_4 &= \epsilon_{k_4k_7} \end{aligned}$$

Diagram 251:

$$\begin{aligned} \text{PO4.251} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{04}_{k_5k_1k_2k_3} \Omega^{31}_{k_7k_8k_9k_6} \Omega^{04}_{k_7k_8k_9k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^k} \\ &= \frac{-(-1)^4}{(3!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{04}_{k_5k_1k_2k_3} \Omega^{31}_{k_7k_8k_9k_6} \Omega^{04}_{k_7k_8k_9k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_6k_4}\ \epsilon_{k_4k_7k_8k_9}} \end{aligned} \tag{515}$$

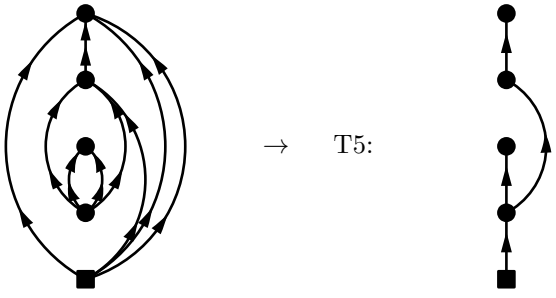


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{516}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6} \\ a_2 &= \epsilon_{k_1k_2k_3k_5} \\ a_3 &= \epsilon^{k_7k_8k_9}_{k_6} \\ a_4 &= \epsilon_{k_4k_7k_8k_9} \end{aligned}$$

Diagram 252:

$$\begin{aligned} \text{PO4.252} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{02}_{k_5k_6} \Omega^{13}_{k_9k_7k_8k_1} \Omega^{04}_{k_9k_2k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon} \\ &= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{02}_{k_5k_6} \Omega^{13}_{k_9k_7k_8k_1} \Omega^{04}_{k_9k_2k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_1k_7k_8k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_9}} \end{aligned} \tag{517}$$



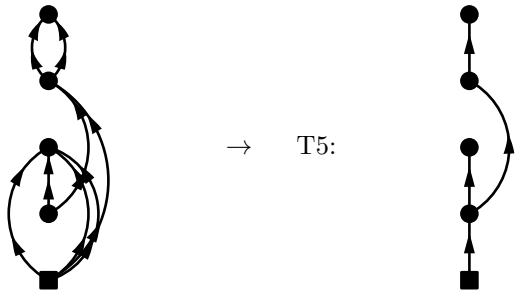
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{518}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_5k_6}$$
$$a_3 = \epsilon^{k_9}_{k_1k_7k_8}$$
$$a_4 = \epsilon_{k_2k_3k_4k_9}$$

Diagram 253:

$$\text{PO4.253} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{22}_{k_7k_8k_6k_4}\Omega^{02}_{k_7k_8}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}}\epsilon$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_1k_2k_3}\Omega^{22}_{k_7k_8k_6k_4}\Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_5}\ \epsilon_{k_4k_6}\ \epsilon_{k_7k_8}} \tag{519}$$



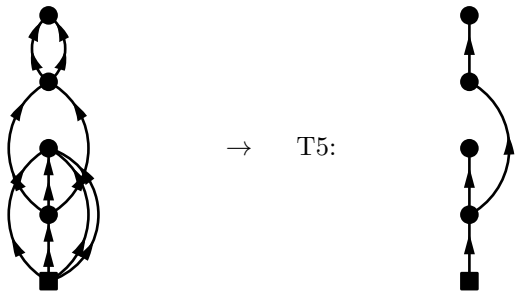
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{520}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_2k_3k_5}$$
$$a_3 = \epsilon^{k_7k_8}_{k_4k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 254:

$$\text{PO4.254} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_2k_3k_4}\Omega^{22}_{k_8k_9k_6k_7}\Omega^{02}_{k_8k_9}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_2k_3k_4}\Omega^{22}_{k_8k_9k_6k_7}\Omega^{02}_{k_8k_9}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_6k_7}\ \epsilon_{k_8k_9}} \tag{521}$$



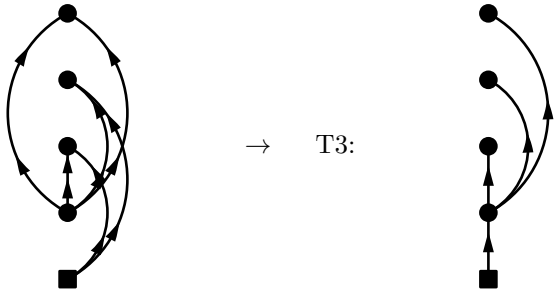
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{522}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3k_4k_5}$$
$$a_3 = \epsilon^{k_8k_9}_{k_6k_7}$$
$$a_4 = \epsilon_{k_8k_9}$$

Diagram 255:

$$\text{PO4.255} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{02}_{k_4k_2}\Omega^{02}_{k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)e^{-\tau_1\epsilon^{k_3k_4k_5k_6}}e^{-\tau_2\epsilon}$$

$$= \frac{-(-1)^4}{2(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{02}_{k_4k_2}\Omega^{02}_{k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_2k_4}\ \epsilon_{k_5k_6}} \tag{523}$$



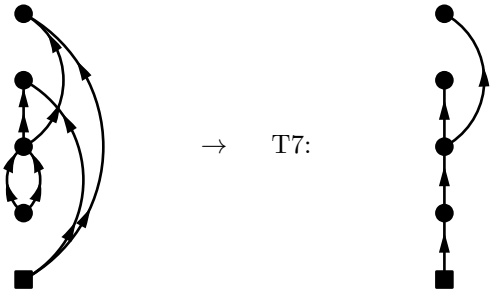
$$\text{T3} = \frac{1}{(a_1+a_2+a_3+a_4)a_2a_3a_4} \tag{524}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_1k_3}$$
$$a_3 = \epsilon_{k_2k_4}$$
$$a_4 = \epsilon_{k_5k_6}$$

Diagram 256:

$$\text{PO4.256} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_4}\Omega^{02}_{k_5k_1}\Omega^{02}_{k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon^{k_3k_4}}e^{-\tau_2\epsilon^{k_5k_6}_{k_3k_4}}$$

$$= \frac{-(-1)^4}{2(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_4}\Omega^{02}_{k_5k_1}\Omega^{02}_{k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2}\ \epsilon_{k_1k_5}\ \epsilon_{k_2k_6}} \tag{525}$$



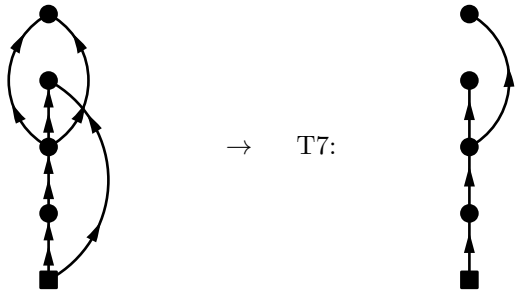
$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{526}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6}_{k_3k_4}$$
$$a_3 = \epsilon_{k_1k_5}$$
$$a_4 = \epsilon_{k_2k_6}$$

Diagram 257:

$$\text{PO4.257} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_3}\Omega^{02}_{k_4k_2}\Omega^{02}_{k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon^{k_3}_{k_1}}e^{-\tau_2\epsilon^{k_4k_5k_6}_{k_3}}e$$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_3}\Omega^{02}_{k_4k_2}\Omega^{02}_{k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2}\ \epsilon_{k_2k_4}\ \epsilon_{k_5k_6}} \tag{527}$$

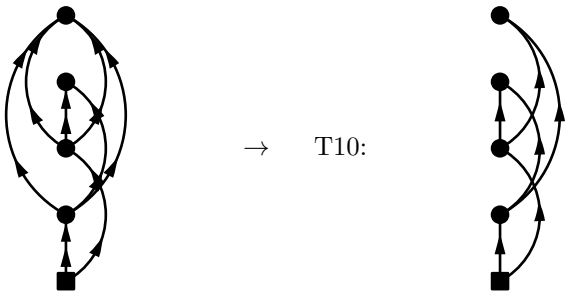


$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{528}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3} \\ a_2 &= \epsilon_{k_3}^{k_4k_5k_6} \\ a_3 &= \epsilon_{k_2k_4} \\ a_4 &= \epsilon_{k_5k_6} \end{aligned}$$

Diagram 258:

$$\begin{aligned} \text{PO4.258} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_2}\Omega^{02}_{k_6k_3}\Omega^{04}_{k_7k_8k_4k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) \\ &= \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_2}\Omega^{02}_{k_6k_3}\Omega^{04}_{k_7k_8k_4k_5}\left[\frac{1}{\epsilon_{k_1k_6k_7k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_6}\ \epsilon_{k_4k_5k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_3k_6}\ \epsilon_{k_4k_5k_} \right. \end{aligned} \tag{529}$$

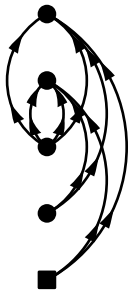


$$\text{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{530}$$

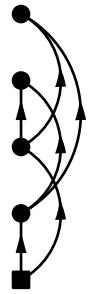
$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3k_4k_5} \\ a_2 &= \epsilon_{k_2}^{k_6k_7k_8} \\ a_3 &= \epsilon_{k_3k_6} \\ a_4 &= \epsilon_{k_4k_5k_7k_8} \end{aligned}$$

Diagram 259:

$$\begin{aligned} \text{PO4.259} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_6k_3k_1}\Omega^{04}_{k_7k_8k_4k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) \\ &= \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_6k_3k_1}\Omega^{04}_{k_7k_8k_4k_2}\left[\frac{1}{\epsilon_{k_1k_5k_6k_2k_7k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_5k_6}\ \epsilon_{k_2k_4k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4}\ \epsilon_{k_1k_} \right. \end{aligned} \tag{531}$$



$\rightarrow$ T10:

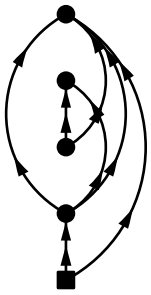


$$\text{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{532}$$

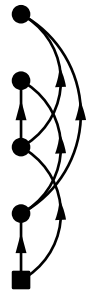
$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6k_7k_8}$$
$$a_3 = \epsilon_{k_1k_3k_5k_6}$$
$$a_4 = \epsilon_{k_2k_4k_7k_8}$$

Diagram 260:

$$\text{PO4.260} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{20}_{k_6k_7}\Omega^{02}_{k_6k_3}\Omega^{04}_{k_7k_4k_5k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau}$$
$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{20}_{k_6k_7}\Omega^{02}_{k_6k_3}\Omega^{04}_{k_7k_4k_5k_2}\left[\frac{1}{\epsilon_{k_1k_6k_2k_7}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_6}\ \epsilon_{k_2k_4k_5k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_3k_6}\ \epsilon_{k_2k_4k_5k_7}}\right. \tag{533}$$



$\rightarrow$ T10:



$$\text{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{534}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7}$$
$$a_3 = \epsilon_{k_3k_6}$$
$$a_4 = \epsilon_{k_2k_4k_5k_7}$$

Diagram 261:

$$\text{PO4.261} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{04}_{k_6k_7k_4k_2}\Omega^{02}_{k_8k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)$$
$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{04}_{k_6k_7k_4k_2}\Omega^{02}_{k_8k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_2k_4k_6k_7}\ \epsilon_{k_5k_8}} \tag{535}$$

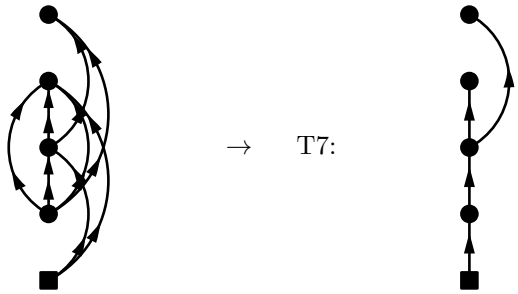
$\rightarrow$ T7:

$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{536}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7k_8}_{k_3}$$
$$a_3 = \epsilon_{k_2k_4k_6k_7}$$
$$a_4 = \epsilon_{k_5k_8}$$

Diagram 262:

$$\mathrm{PO4.262} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_1}\Omega^{04}_{k_7k_4k_5k_2}\Omega^{02}_{k_8k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)$$
$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_1}\Omega^{04}_{k_7k_4k_5k_2}\Omega^{02}_{k_8k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4k_5k_6}\ \epsilon_{k_2k_4k_5k_7}\ \epsilon_{k_6k_8}} \tag{537}$$

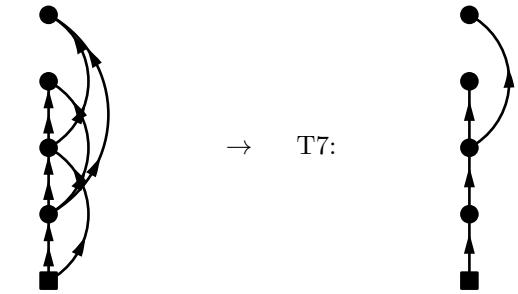


$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{538}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_1k_3}$$
$$a_3 = \epsilon_{k_2k_4k_5k_7}$$
$$a_4 = \epsilon_{k_6k_8}$$

Diagram 263:

$$\mathrm{PO4.263} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_2}\Omega^{02}_{k_6k_4}\Omega^{02}_{k_7k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4$$
$$= \frac{-(-1)^4}{2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_2}\Omega^{02}_{k_6k_4}\Omega^{02}_{k_7k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_4k_6}\ \epsilon_{k_5k_7}} \tag{539}$$



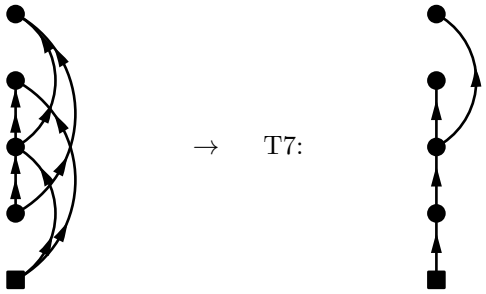
$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{540}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7}_{k_2k_3}$$
$$a_3 = \epsilon_{k_4k_6}$$
$$a_4 = \epsilon_{k_5k_7}$$

Diagram 264:

$$\text{PO4.264} = \lim_{\tau\to\infty} -(-1)^4 \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{02}_{k_5k_2}\Omega^{02}_{k_6k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon^{k_3k}}$$

$$= -(-1)^4 \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{02}_{k_5k_2}\Omega^{02}_{k_6k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_4k_6}} \tag{541}$$



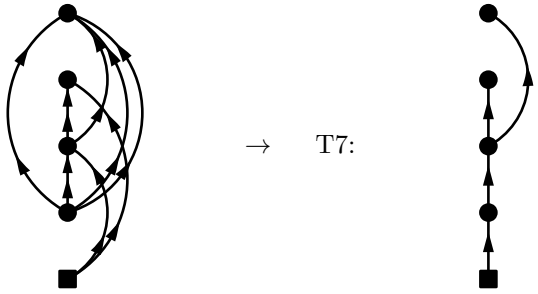
$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{542}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6}_{k_1k_3}$$
$$a_3 = \epsilon_{k_2k_5}$$
$$a_4 = \epsilon_{k_4k_6}$$

Diagram 265:

$$\text{PO4.265} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_1}\Omega^{02}_{k_7k_2}\Omega^{04}_{k_8k_4k_5k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)$$

$$= \frac{-(-1)^4}{(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{22}_{k_7k_8k_3k_1}\Omega^{02}_{k_7k_2}\Omega^{04}_{k_8k_4k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4k_5k_6}\ \epsilon_{k_2k_7}\ \epsilon_{k_4k_5k_6k_8}} \tag{543}$$



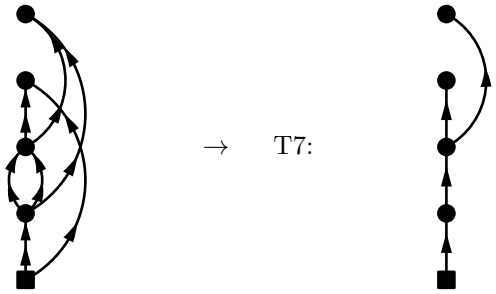
$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{544}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_1k_3}$$
$$a_3 = \epsilon_{k_2k_7}$$
$$a_4 = \epsilon_{k_4k_5k_6k_8}$$

Diagram 266:

$$\text{PO4.266} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{02}_{k_6k_2}\Omega^{02}_{k_7k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{02}_{k_6k_2}\Omega^{02}_{k_7k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_2k_5}\ \epsilon_{k_2k_6}\ \epsilon_{k_5k_7}} \tag{545}$$



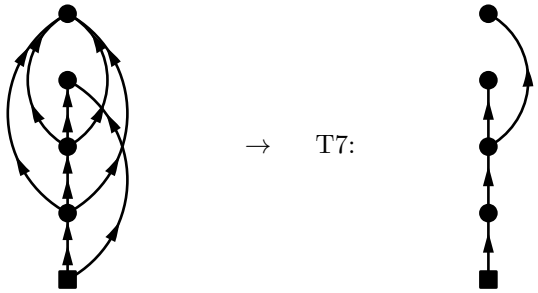
$\rightarrow$ T7:

$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{546}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3k_4k_5} \\ a_2 &= \epsilon_{k_3k_4}^{k_6k_7} \\ a_3 &= \epsilon_{k_2k_6} \\ a_4 &= \epsilon_{k_5k_7} \end{aligned}$$

Diagram 267:

$$\begin{aligned} \text{PO4.267} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{31}_{k_3k_4k_5k_1} \Omega^{31}_{k_6k_7k_8k_3} \Omega^{02}_{k_6k_2} \Omega^{04}_{k_7k_8k_4k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{31}_{k_3k_4k_5k_1} \Omega^{31}_{k_6k_7k_8k_3} \Omega^{02}_{k_6k_2} \Omega^{04}_{k_7k_8k_4k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_2k_6}\ \epsilon_{k_4k_5k_7k_8}} \end{aligned} \tag{547}$$



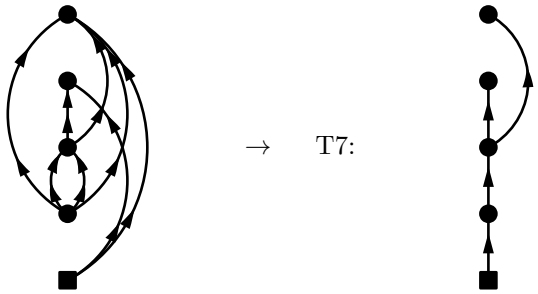
$\rightarrow$ T7:

$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{548}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3k_4k_5} \\ a_2 &= \epsilon_{k_3}^{k_6k_7k_8} \\ a_3 &= \epsilon_{k_2k_6} \\ a_4 &= \epsilon_{k_4k_5k_7k_8} \end{aligned}$$

Diagram 268:

$$\begin{aligned} \text{PO4.268} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{02}_{k_7k_1} \Omega^{04}_{k_8k_5k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{40}_{k_3k_4k_5k_6} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{02}_{k_7k_1} \Omega^{04}_{k_8k_5k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2k_5k_6}\ \epsilon_{k_1k_7}\ \epsilon_{k_2k_5k_6k_8}} \end{aligned} \tag{549}$$



$\rightarrow$ T7:

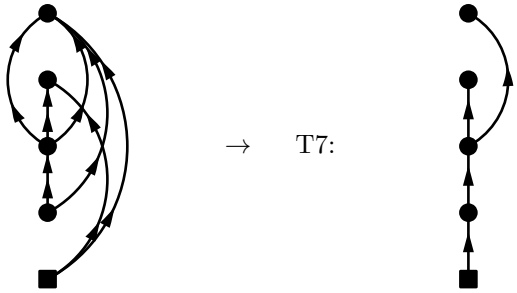
$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{550}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_3k_4}$$
$$a_3 = \epsilon_{k_1k_7}$$
$$a_4 = \epsilon_{k_2k_5k_6k_8}$$

Diagram 269:

$$\mathrm{PO4.269} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{02}_{k_5k_1}\Omega^{04}_{k_6k_7k_4k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau}$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{02}_{k_5k_1}\Omega^{04}_{k_6k_7k_4k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_1k_5}\ \epsilon_{k_2k_4k_6k_7}} \tag{551}$$



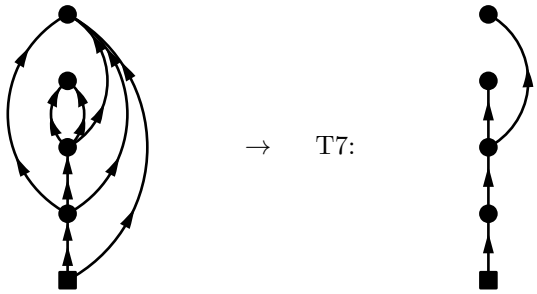
$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{552}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6k_7}_{k_3}$$
$$a_3 = \epsilon_{k_1k_5}$$
$$a_4 = \epsilon_{k_2k_4k_6k_7}$$

Diagram 270:

$$\mathrm{PO4.270} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{02}_{k_6k_7}\Omega^{04}_{k_8k_4k_5k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{02}_{k_6k_7}\Omega^{04}_{k_8k_4k_5k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_6k_7}\ \epsilon_{k_2k_4k_5k_8}} \tag{553}$$



$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{554}$$

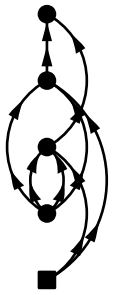
$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7k_8}_{k_3}$$
$$a_3 = \epsilon_{k_6k_7}$$
$$a_4 = \epsilon_{k_2k_4k_5k_8}$$

Diagram 271:

$$\text{PO4.271} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{13}_{k_8k_5k_6k_2}\Omega^{02}_{k_8k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{13}_{k_8k_5k_6k_2}\Omega^{02}_{k_8k_7} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_8}\ \epsilon_{k_1k_3k_4k_2k_5k_6}\ \epsilon_{k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_2k_5k_6}\ \epsilon_{k_2k_5}\right.$$

(555)



$\rightarrow$ T11:

$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \quad (556)$$

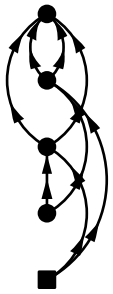
$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1k_3k_4}$$
$$a_3 = \epsilon^{k_8}_{k_2k_5k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 272:

$$\text{PO4.272} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{22}_{k_7k_8k_4k_2}\Omega^{04}_{k_7k_8k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{22}_{k_7k_8k_4k_2}\Omega^{04}_{k_7k_8k_5k_6} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_7k_8}\ \epsilon_{k_1k_3k_2k_4}\ \epsilon_{k_5k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4}\ \epsilon_{k_2k_4k_5k_6}\right.$$

(557)



$\rightarrow$ T11:

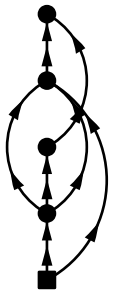
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \quad (558)$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6}_{k_1k_3}$$
$$a_3 = \epsilon^{k_7k_8}_{k_2k_4}$$
$$a_4 = \epsilon_{k_5k_6k_7k_8}$$

Diagram 273:

$$\text{PO4.273} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{11}_{k_6k_3}\Omega^{13}_{k_7k_4k_5k_2}\Omega^{02}_{k_7k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau}$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{11}_{k_6k_3}\Omega^{13}_{k_7k_4k_5k_2}\Omega^{02}_{k_7k_6} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_7}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_6k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_2k_4k_5k_6}\ \epsilon_{k_6k_7}}\right] \tag{559}$$



$\rightarrow$ T11:

$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{560}$$

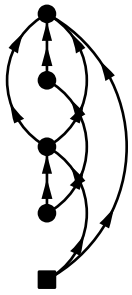
$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6}_{k_3}$$
$$a_3 = \epsilon^{k_7}_{k_2k_4k_5}$$
$$a_4 = \epsilon_{k_6k_7}$$

Diagram 274:

$$\text{PO4.274} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{11}_{k_7k_4}\Omega^{04}_{k_7k_5k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau}$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{11}_{k_7k_4}\Omega^{04}_{k_7k_5k_6k_2} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_7}\ \epsilon_{k_1k_3k_4k_2}\ \epsilon_{k_2k_5k_6k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_2}\ \epsilon_{k_4k_2k_5k_6}\ \epsilon_{k_2}}\right.$$

(561)



$\rightarrow$ T11:

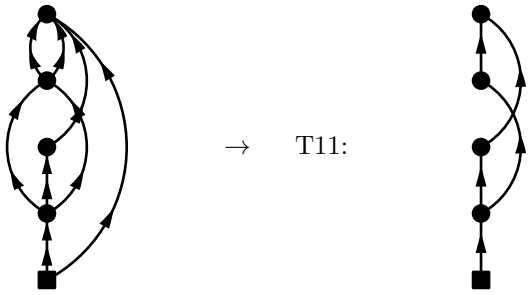
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{562}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6}_{k_1k_3}$$
$$a_3 = \epsilon^{k_7}_{k_4}$$
$$a_4 = \epsilon_{k_2k_5k_6k_7}$$

Diagram 275:

$$\text{PO4.275} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{11}_{k_6k_3}\Omega^{22}_{k_7k_8k_4k_5}\Omega^{04}_{k_7k_8k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{11}_{k_6k_3}\Omega^{22}_{k_7k_8k_4k_5}\Omega^{04}_{k_7k_8k_6k_2} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_7k_8}\ \epsilon_{k_3k_4k_5k_2}\ \epsilon_{k_2k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_2}\ \epsilon_{k_4k_5k_2k_6}\ } \right. \tag{563}$$



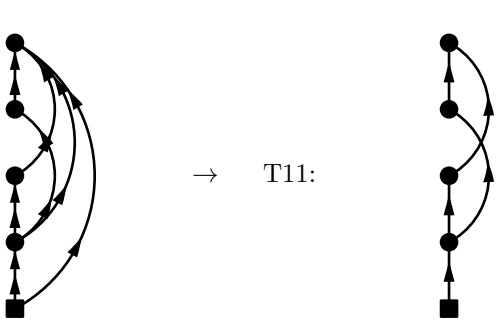
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{564}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\ a_2 &= \epsilon^{k_6}_{k_3} \\ a_3 &= \epsilon^{k_7k_8}_{k_4k_5} \\ a_4 &= \epsilon_{k_2k_6k_7k_8} \end{aligned}$$

Diagram 276:

$$\text{PO4.276} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{11}_{k_6k_3}\Omega^{11}_{k_7k_4}\Omega^{04}_{k_7k_6k_5k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4$$

$$= \frac{-(-1)^4}{2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{11}_{k_6k_3}\Omega^{11}_{k_7k_4}\Omega^{04}_{k_7k_6k_5k_2} \left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_5k_7}\ \epsilon_{k_3k_4k_2k_5}\ \epsilon_{k_2k_5k_6k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_2k_5}\ \epsilon_{k_4k_2k_5k_6}\ \epsilon_{k_2}} \right. \tag{565}$$



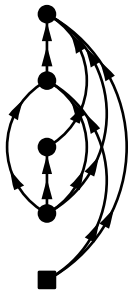
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{566}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\ a_2 &= \epsilon^{k_6}_{k_3} \\ a_3 &= \epsilon^{k_7}_{k_4} \\ a_4 &= \epsilon_{k_2k_5k_6k_7} \end{aligned}$$

Diagram 277:

$$\text{PO4.277} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{11}_{k_7k_3}\Omega^{13}_{k_8k_4k_5k_1}\Omega^{04}_{k_8k_7k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_2)\theta($$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{11}_{k_7k_3}\Omega^{13}_{k_8k_4k_5k_1}\Omega^{04}_{k_8k_7k_6k_2}\left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_6k_8}\ \epsilon_{k_3k_1k_4k_5k_2k_6}\ \epsilon_{k_2k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_4k_5k_2k_6}\ \epsilon_{k}}\right. \tag{567}$$



$\rightarrow$ T11:

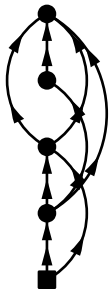
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{568}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_3}$$
$$a_3 = \epsilon^{k_8}_{k_1k_4k_5}$$
$$a_4 = \epsilon_{k_2k_6k_7k_8}$$

Diagram 278:

$$\text{PO4.278} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_2}\Omega^{11}_{k_8k_4}\Omega^{04}_{k_8k_6k_7k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_2)\theta($$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_2}\Omega^{11}_{k_8k_4}\Omega^{04}_{k_8k_6k_7k_5}\left[\frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3k_5k_8}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_5k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_4k_5k_6k_7}\ \epsilon}\right. \tag{569}$$



$\rightarrow$ T11:

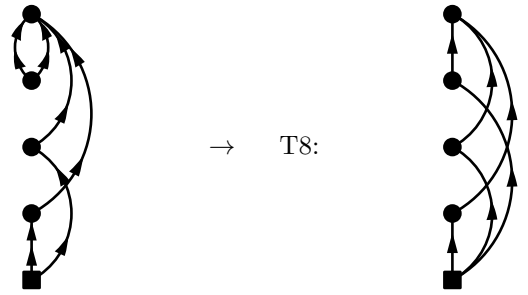
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{570}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7}_{k_2k_3}$$
$$a_3 = \epsilon^{k_8}_{k_4}$$
$$a_4 = \epsilon_{k_5k_6k_7k_8}$$

Diagram 279:

$$\text{PO4.279} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{11}_{k_4k_2}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_6k_4k_3} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3}_{k_1}}e^{-\tau_2\epsilon^{k_4}_{k_2}}e^{-\tau}$$

$$= \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{11}_{k_4k_2}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_6k_4k_3} \left[\frac{1}{\epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_2k_3k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_6}} + \frac{1}{\epsilon_{k_1k_4k_5k_6}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5}}\right. \tag{571}$$



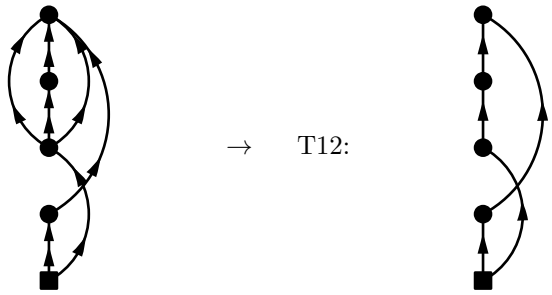
$$\text{T8} = \frac{1}{(a_1+a_2+a_4)(a_2+a_4)(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_4)(a_2+a_1+a_4)(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_4)(a_2+a_1+a_3+} \tag{572}$$

$$a_1 = \epsilon^{k_3}_{k_1}$$
$$a_2 = \epsilon^{k_4}_{k_2}$$
$$a_3 = \epsilon^{k_5k_6}$$
$$a_4 = \epsilon_{k_3k_4k_5k_6}$$

Diagram 280:

$$\text{PO4.280} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_2}\Omega^{11}_{k_7k_4}\Omega^{04}_{k_7k_5k_6k_3} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau}$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_2}\Omega^{11}_{k_7k_4}\Omega^{04}_{k_7k_5k_6k_3} \left[\frac{1}{\epsilon_{k_1k_5k_6k_7}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_4k_5k_6}\ \epsilon_{k_3k_5k_6k_7}} + \frac{1}{\epsilon_{k_1k_4k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_4k_3k_5k_6}\ \epsilon_{k_5}}\right. \tag{573}$$



$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{574}$$

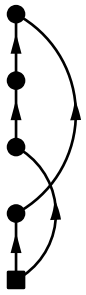
$$a_1 = \epsilon^{k_3}_{k_1}$$
$$a_2 = \epsilon^{k_4k_5k_6}_{k_2}$$
$$a_3 = \epsilon^{k_7}_{k_4}$$
$$a_4 = \epsilon_{k_3k_5k_6k_7}$$

Diagram 281:

$$\text{PO4.281} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_2}\Omega^{22}_{k_7k_8k_4k_5}\Omega^{04}_{k_7k_8k_6k_3} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_2}\Omega^{22}_{k_7k_8k_4k_5}\Omega^{04}_{k_7k_8k_6k_3} \left[\frac{1}{\epsilon_{k_1k_6k_7k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_4k_5k_6}\ \epsilon_{k_3k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_4k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_4k_5k_3k_6}} \right. \tag{575}$$

$\rightarrow$ T12:



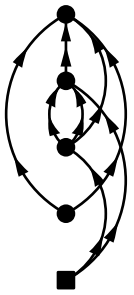
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{576}$$

$$a_1 = \epsilon^{k_3}_{k_1}$$
$$a_2 = \epsilon^{k_4k_5k_6}_{k_2}$$
$$a_3 = \epsilon^{k_7k_8}_{k_4k_5}$$
$$a_4 = \epsilon_{k_3k_6k_7k_8}$$

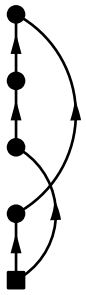
Diagram 282:

$$\text{PO4.282} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_6k_2}\Omega^{04}_{k_8k_7k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_6k_2}\Omega^{04}_{k_8k_7k_3k_4} \left[\frac{1}{\epsilon_{k_7k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_2k_5k_6k_7}\ \epsilon_{k_3k_4k_7k_8}} + \frac{1}{\epsilon_{k_2k_5k_6k_7}\ \epsilon_{k_1k_2}\ \epsilon_{k_2k_5k_6k_3k_4k}} \right. \tag{577}$$



$\rightarrow$ T12:



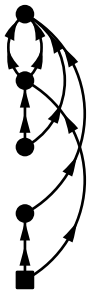
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{578}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_3 = \epsilon^{k_8}_{k_2k_5k_6}$$
$$a_4 = \epsilon_{k_3k_4k_7k_8}$$

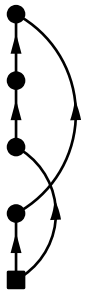
Diagram 283:

$$\text{PO4.283} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{20}_{k_4k_5}\Omega^{22}_{k_6k_7k_4k_2}\Omega^{04}_{k_6k_7k_5k_3} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{20}_{k_4k_5}\Omega^{22}_{k_6k_7k_4k_2}\Omega^{04}_{k_6k_7k_5k_3} \left[\frac{1}{\epsilon_{k_1k_5k_6k_7}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_4k_5}\ \epsilon_{k_3k_5k_6k_7}} + \frac{1}{\epsilon_{k_1k_2k_4k_5}\ \epsilon_{k_1k_2}\ \epsilon_{k_2k_4k_3k_5}\ \epsilon_{k_3k_}\right. \tag{579}$$



$\rightarrow$ T12:



$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{580}$$

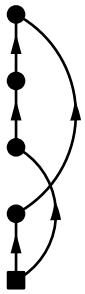
$$a_1 = \epsilon^{k_3}_{k_1}$$
$$a_2 = \epsilon^{k_4k_5}$$
$$a_3 = \epsilon^{k_6k_7}_{k_2k_4}$$
$$a_4 = \epsilon_{k_3k_5k_6k_7}$$

Diagram 284:

$$\text{PO4.284} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{40}_{k_4k_5k_6k_7}\Omega^{13}_{k_8k_4k_5k_2}\Omega^{04}_{k_8k_6k_7k_3} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{40}_{k_4k_5k_6k_7}\Omega^{13}_{k_8k_4k_5k_2}\Omega^{04}_{k_8k_6k_7k_3} \left[\frac{1}{\epsilon_{k_1k_6k_7k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_4k_5k_6k_7}\ \epsilon_{k_3k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_4k_5k_6k_7}\ \epsilon_{k_1k_2}\ \epsilon}\right. \tag{581}$$

$\rightarrow$ T12:



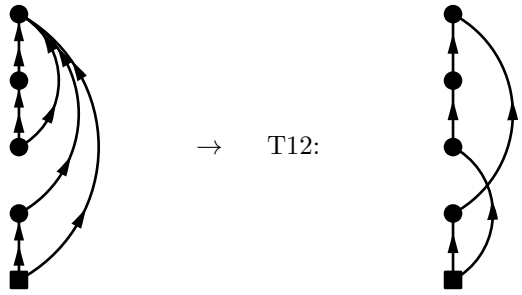
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{582}$$

$$a_1 = \epsilon^{k_3}_{k_1}$$
$$a_2 = \epsilon^{k_4k_5k_6k_7}$$
$$a_3 = \epsilon^{k_8}_{k_2k_4k_5}$$
$$a_4 = \epsilon_{k_3k_6k_7k_8}$$

Diagram 285:

$$\text{PO4.285} = \lim_{\tau\to\infty}(-1)^4\sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{20}_{k_4k_5}\Omega^{11}_{k_6k_4}\Omega^{04}_{k_6k_5k_3k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3}_{k_1}}e^{-\tau}$$

$$= (-1)^4\sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{20}_{k_4k_5}\Omega^{11}_{k_6k_4}\Omega^{04}_{k_6k_5k_3k_2}\left[\frac{1}{\epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_4k_2k_5}\ \epsilon_{k_2k_3k_5k_6}} + \frac{1}{\epsilon_{k_1k_4k_2k_5}\ \epsilon_{k_1k_2}\ \epsilon_{k_4k_2k_3k_5}\ \epsilon_{k_2k_3k_5k_6}}\right. \tag{583}$$



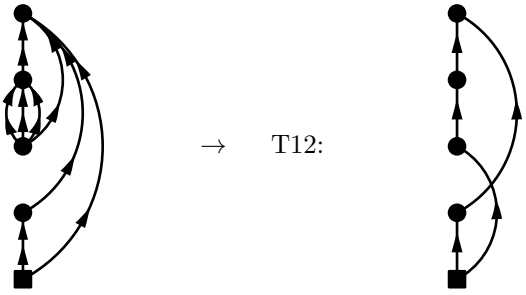
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{584}$$

$$a_1 = \epsilon^{k_3}_{k_1}$$
$$a_2 = \epsilon^{k_4k_5}$$
$$a_3 = \epsilon^{k_6}_{k_4}$$
$$a_4 = \epsilon_{k_2k_3k_5k_6}$$

Diagram 286:

$$\text{PO4.286} = \lim_{\tau\to\infty}\frac{(-1)^4}{(3!)}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{40}_{k_4k_5k_6k_7}\Omega^{13}_{k_8k_4k_5k_6}\Omega^{04}_{k_8k_7k_3k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-}$$

$$= \frac{(-1)^4}{(3!)}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{40}_{k_4k_5k_6k_7}\Omega^{13}_{k_8k_4k_5k_6}\Omega^{04}_{k_8k_7k_3k_2}\left[\frac{1}{\epsilon_{k_1k_2k_7k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_4k_5k_6k_2k_7}\ \epsilon_{k_2k_3k_7k_8}} + \frac{1}{\epsilon_{k_1k_4k_5k_6k_2k_7}\ \epsilon_{k_1k_2}\ \epsilon_{k}}\right. \tag{585}$$



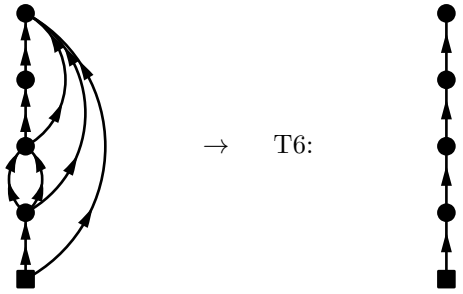
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{586}$$

$$a_1 = \epsilon^{k_3}_{k_1}$$
$$a_2 = \epsilon^{k_4k_5k_6k_7}$$
$$a_3 = \epsilon^{k_8}_{k_4k_5k_6}$$
$$a_4 = \epsilon_{k_2k_3k_7k_8}$$

Diagram 287:

$$\text{PO4.287} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{11}_{k_8k_6}\Omega^{04}_{k_8k_7k_5k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta($$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{11}_{k_8k_6}\Omega^{04}_{k_8k_7k_5k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_2k_5}\ \epsilon_{k_6k_2k_5k_7}\ \epsilon_{k_2k_5k_7k_8}} \tag{587}$$



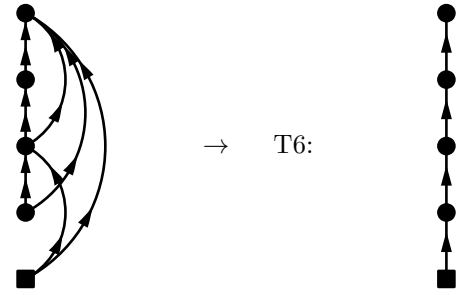
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{588}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7}_{k_3k_4}$$
$$a_3 = \epsilon^{k_8}_{k_6}$$
$$a_4 = \epsilon_{k_2k_5k_7k_8}$$

Diagram 288:

$$\text{PO4.288} = \lim_{\tau\to\infty} -(-1)^4 \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{11}_{k_7k_5}\Omega^{04}_{k_7k_6k_4k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4$$

$$= -(-1)^4 \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{11}_{k_7k_5}\Omega^{04}_{k_7k_6k_4k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4}\ \epsilon_{k_5k_2k_4k_6}\ \epsilon_{k_2k_4k_6k_7}} \tag{589}$$



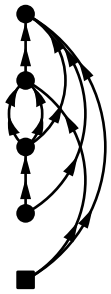
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{590}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6}_{k_1k_3}$$
$$a_3 = \epsilon^{k_7}_{k_5}$$
$$a_4 = \epsilon_{k_2k_4k_6k_7}$$

Diagram 289:

$$\text{PO4.289} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_5k_6k_1}\Omega^{04}_{k_8k_7k_4k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta($$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_5k_6k_1}\Omega^{04}_{k_8k_7k_4k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_2k_4}\ \epsilon_{k_1k_5k_6k_2k_4k_7}\ \epsilon_{k_2k_4k_7k_8}} \tag{591}$$



$\rightarrow$ T6:

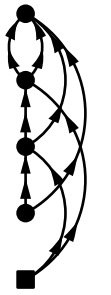
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{592}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3 k_4} \\ a_2 &= \epsilon^{k_5 k_6 k_7}_{k_3} \\ a_3 &= \epsilon^{k_8}_{k_1 k_5 k_6} \\ a_4 &= \epsilon_{k_2 k_4 k_7 k_8} \end{aligned}$$

Diagram 290:

$$\text{PO4.290} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{22}_{k_5 k_6 k_3 k_1} \Omega^{22}_{k_7 k_8 k_5 k_2} \Omega^{04}_{k_7 k_8 k_6 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{22}_{k_5 k_6 k_3 k_1} \Omega^{22}_{k_7 k_8 k_5 k_2} \Omega^{04}_{k_7 k_8 k_6 k_4}}{\epsilon_{k_1 k_2}\ \epsilon_{k_1 k_3 k_2 k_4}\ \epsilon_{k_2 k_5 k_4 k_6}\ \epsilon_{k_4 k_6 k_7 k_8}} \tag{593}$$



$\rightarrow$ T6:

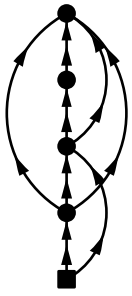
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{594}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3 k_4} \\ a_2 &= \epsilon^{k_5 k_6}_{k_1 k_3} \\ a_3 &= \epsilon^{k_7 k_8}_{k_2 k_5} \\ a_4 &= \epsilon_{k_4 k_6 k_7 k_8} \end{aligned}$$

Diagram 291:

$$\text{PO4.291} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{22}_{k_6 k_7 k_3 k_2} \Omega^{11}_{k_8 k_6} \Omega^{04}_{k_8 k_7 k_4 k_5} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta($$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{22}_{k_6 k_7 k_3 k_2} \Omega^{11}_{k_8 k_6} \Omega^{04}_{k_8 k_7 k_4 k_5}}{\epsilon_{k_1 k_2}\ \epsilon_{k_2 k_3 k_4 k_5}\ \epsilon_{k_6 k_4 k_5 k_7}\ \epsilon_{k_4 k_5 k_7 k_8}} \tag{595}$$



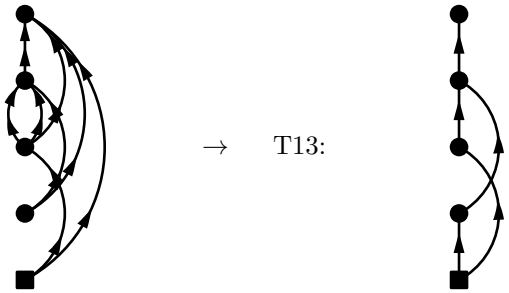
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{596}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\ a_2 &= \epsilon^{k_6k_7}_{k_2k_3} \\ a_3 &= \epsilon^{k_8}_{k_6} \\ a_4 &= \epsilon_{k_4k_5k_7k_8} \end{aligned}$$

Diagram 292:

$$\begin{aligned} \mathrm{PO4.292} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_6k_3}\Omega^{04}_{k_8k_7k_4k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_6k_3}\Omega^{04}_{k_8k_7k_4k_2} \left[\frac{1}{\epsilon_{k_5k_6k_2k_7}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_5k_6k_2k_4k_7}\ \epsilon_{k_2k_4k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4}\ \epsilon_{k_3k_5} \right. \end{aligned} \tag{597}$$

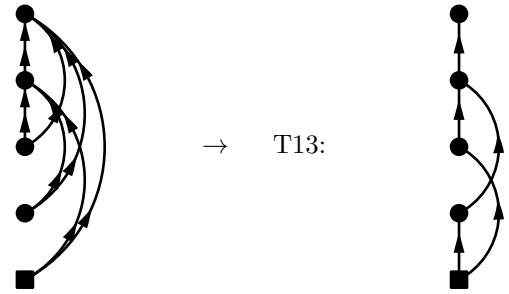


$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{598}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_3 &= \epsilon^{k_8}_{k_3k_5k_6} \\ a_4 &= \epsilon_{k_2k_4k_7k_8} \end{aligned}$$

Diagram 293:

$$\begin{aligned} \mathrm{PO4.293} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{13}_{k_7k_5k_3k_1}\Omega^{04}_{k_7k_6k_4k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4 \\ &= \frac{-(-1)^4}{2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{13}_{k_7k_5k_3k_1}\Omega^{04}_{k_7k_6k_4k_2} \left[\frac{1}{\epsilon_{k_1k_5k_2k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_5k_2k_4k_6}\ \epsilon_{k_2k_4k_6k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4}\ \epsilon_{k_1k_3k_5k_} \right. \end{aligned} \tag{599}$$

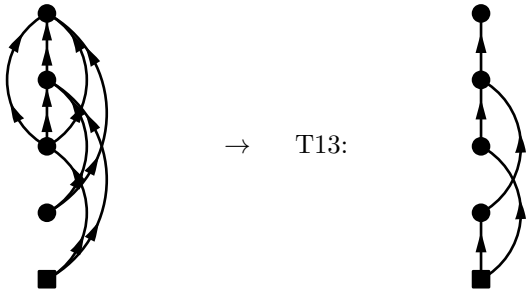


$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{600}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3 k_4} \\ a_2 &= \epsilon^{k_5 k_6} \\ a_3 &= \epsilon^{k_7}_{k_1 k_3 k_5} \\ a_4 &= \epsilon_{k_2 k_4 k_6 k_7} \end{aligned}$$

Diagram 294:

$$\begin{aligned} \mathrm{PO4.294} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_3 k_2} \Omega^{04}_{k_8 k_6 k_7 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_3 k_2} \Omega^{04}_{k_8 k_6 k_7 k_4} \left[\frac{1}{\epsilon_{k_2 k_5 k_6 k_7}\ \epsilon_{k_1 k_2}\ \epsilon_{k_2 k_3 k_5 k_4 k_6 k_7}\ \epsilon_{k_4 k_6 k_7 k_8}} + \frac{1}{\epsilon_{k_1 k_2}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_2 k_5}} \right. \end{aligned} \tag{601}$$



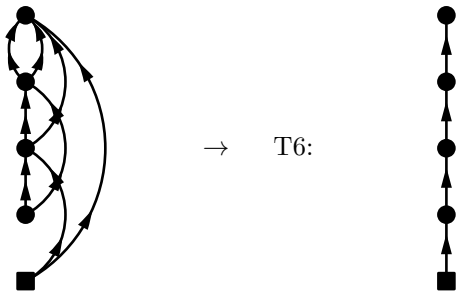
$\rightarrow$ T13:

$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{602}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3 k_4} \\ a_2 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\ a_3 &= \epsilon^{k_8}_{k_2 k_3 k_5} \\ a_4 &= \epsilon_{k_4 k_6 k_7 k_8} \end{aligned}$$

Diagram 295:

$$\begin{aligned} \mathrm{PO4.295} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{22}_{k_5 k_6 k_3 k_1} \Omega^{22}_{k_7 k_8 k_5 k_4} \Omega^{04}_{k_7 k_8 k_6 k_2} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{22}_{k_5 k_6 k_3 k_1} \Omega^{22}_{k_7 k_8 k_5 k_4} \Omega^{04}_{k_7 k_8 k_6 k_2}}{\epsilon_{k_1 k_2}\ \epsilon_{k_1 k_3 k_4 k_2}\ \epsilon_{k_4 k_5 k_2 k_6}\ \epsilon_{k_2 k_6 k_7 k_8}} \end{aligned} \tag{603}$$



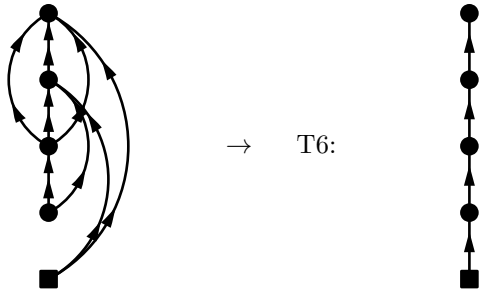
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{604}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5k_6}_{k_1k_3} \\ a_3 &= \epsilon^{k_7k_8}_{k_4k_5} \\ a_4 &= \epsilon_{k_2k_6k_7k_8} \end{aligned}$$

Diagram 296:

$$\begin{aligned} \mathrm{PO4.296} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_5k_4k_1}\Omega^{04}_{k_8k_6k_7k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{13}_{k_8k_5k_4k_1}\Omega^{04}_{k_8k_6k_7k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_4k_2}\ \epsilon_{k_1k_4k_5k_2k_6k_7}\ \epsilon_{k_2k_6k_7k_8}} \end{aligned} \tag{605}$$

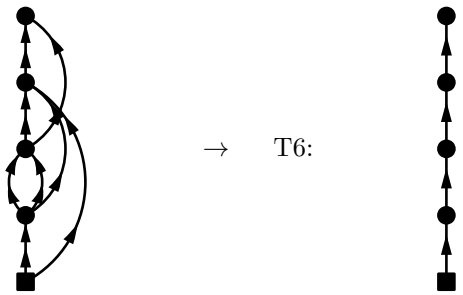


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{606}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5k_6k_7}_{k_3} \\ a_3 &= \epsilon^{k_8}_{k_1k_4k_5} \\ a_4 &= \epsilon_{k_2k_6k_7k_8} \end{aligned}$$

Diagram 297:

$$\begin{aligned} \mathrm{PO4.297} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{13}_{k_8k_6k_5k_2}\Omega^{02}_{k_8k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{13}_{k_8k_6k_5k_2}\Omega^{02}_{k_8k_7}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_2k_5}\ \epsilon_{k_2k_5k_6k_7}\ \epsilon_{k_7k_8}} \end{aligned} \tag{607}$$

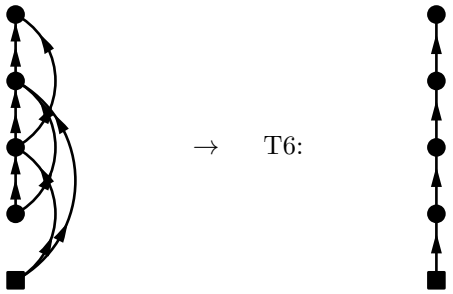


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{608}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\
a_2 &= \epsilon^{k_6k_7}_{k_3k_4} \\
a_3 &= \epsilon^{k_8}_{k_2k_5k_6} \\
a_4 &= \epsilon_{k_7k_8}
\end{aligned}
$$

Diagram 298:

$$
\begin{aligned}
\text{PO4.298} &= \lim_{\tau\to\infty} -(-1)^4 \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{13}_{k_7k_5k_4k_2}\Omega^{02}_{k_7k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4 \\
&= -(-1)^4 \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{13}_{k_7k_5k_4k_2}\Omega^{02}_{k_7k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4}\ \epsilon_{k_2k_4k_5k_6}\ \epsilon_{k_6k_7}} \qquad (609)
\end{aligned}
$$

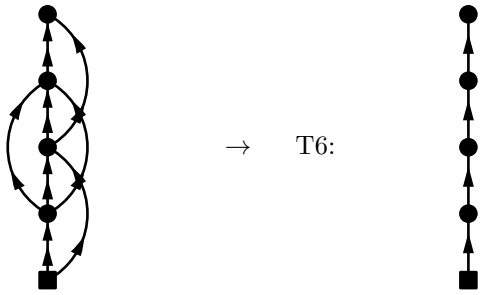


$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \qquad (610)
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4} \\
a_2 &= \epsilon^{k_5k_6}_{k_1k_3} \\
a_3 &= \epsilon^{k_7}_{k_2k_4k_5} \\
a_4 &= \epsilon_{k_6k_7}
\end{aligned}
$$

Diagram 299:

$$
\begin{aligned}
\text{PO4.299} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_2}\Omega^{13}_{k_8k_6k_4k_5}\Omega^{02}_{k_8k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\\
&= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_2}\Omega^{13}_{k_8k_6k_4k_5}\Omega^{02}_{k_8k_7}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_4k_5k_6k_7}\ \epsilon_{k_7k_8}} \qquad (611)
\end{aligned}
$$



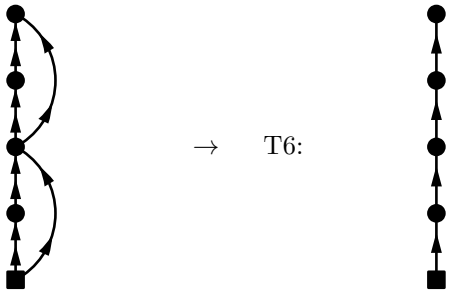
$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \qquad (612)
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\
a_2 &= \epsilon^{k_6k_7}_{k_2k_3} \\
a_3 &= \epsilon^{k_8}_{k_4k_5k_6} \\
a_4 &= \epsilon_{k_7k_8}
\end{aligned}
$$

Diagram 300:

$$\text{PO4.300} = \lim_{\tau\to\infty}(-1)^4\sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{22}_{k_4k_5k_3k_2}\Omega^{11}_{k_6k_4}\Omega^{02}_{k_6k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3}_{k_1}}e^{-\tau}$$

$$= (-1)^4\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{22}_{k_4k_5k_3k_2}\Omega^{11}_{k_6k_4}\Omega^{02}_{k_6k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_5}\ \epsilon_{k_5k_6}} \tag{613}$$



$\rightarrow$ T6:

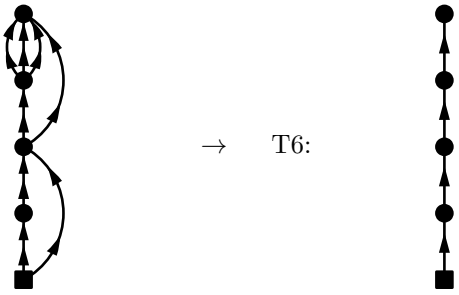
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{614}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3}_{k_1}\\ a_2 &= \epsilon^{k_4k_5}_{k_2k_3}\\ a_3 &= \epsilon^{k_6}_{k_4}\\ a_4 &= \epsilon_{k_5k_6}\end{aligned}$$

Diagram 301:

$$\text{PO4.301} = \lim_{\tau\to\infty}\frac{(-1)^4}{(3!)}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{22}_{k_4k_5k_3k_2}\Omega^{31}_{k_6k_7k_8k_4}\Omega^{04}_{k_6k_7k_8k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-}$$

$$= \frac{(-1)^4}{(3!)}\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{22}_{k_4k_5k_3k_2}\Omega^{31}_{k_6k_7k_8k_4}\Omega^{04}_{k_6k_7k_8k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_5}\ \epsilon_{k_5k_6k_7k_8}} \tag{615}$$



$\rightarrow$ T6:

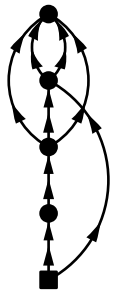
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{616}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3}_{k_1}\\ a_2 &= \epsilon^{k_4k_5}_{k_2k_3}\\ a_3 &= \epsilon^{k_6k_7k_8}_{k_4}\\ a_4 &= \epsilon_{k_5k_6k_7k_8}\end{aligned}$$

Diagram 302:

$$\text{PO4.302} = \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^2}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_3}\Omega^{22}_{k_7k_8k_4k_2}\Omega^{04}_{k_7k_8k_5k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-}$$

$$= \frac{(-1)^4}{(2!)^2}\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_3}\Omega^{22}_{k_7k_8k_4k_2}\Omega^{04}_{k_7k_8k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2}\ \epsilon_{k_2k_4k_5k_6}\ \epsilon_{k_5k_6k_7k_8}} \tag{617}$$



$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{618}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3}_{k_1} \\ a_2 &= \epsilon^{k_4k_5k_6}_{k_3} \\ a_3 &= \epsilon^{k_7k_8}_{k_2k_4} \\ a_4 &= \epsilon_{k_5k_6k_7k_8} \end{aligned}$$

Diagram 303:

$$\begin{aligned} \text{PO4.303} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_3}\Omega^{13}_{k_7k_4k_5k_2}\Omega^{02}_{k_7k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau} \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_3}\Omega^{13}_{k_7k_4k_5k_2}\Omega^{02}_{k_7k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2}\ \epsilon_{k_2k_4k_5k_6}\ \epsilon_{k_6k_7}} \end{aligned} \tag{619}$$

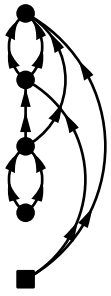
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{620}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3}_{k_1} \\ a_2 &= \epsilon^{k_4k_5k_6}_{k_3} \\ a_3 &= \epsilon^{k_7}_{k_2k_4k_5} \\ a_4 &= \epsilon_{k_6k_7} \end{aligned}$$

Diagram 304:

$$\begin{aligned} \text{PO4.304} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_4}\Omega^{22}_{k_7k_8k_5k_1}\Omega^{04}_{k_7k_8k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3) \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_4}\Omega^{22}_{k_7k_8k_5k_1}\Omega^{04}_{k_7k_8k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2}\ \epsilon_{k_1k_5k_2k_6}\ \epsilon_{k_2k_6k_7k_8}} \end{aligned} \tag{621}$$



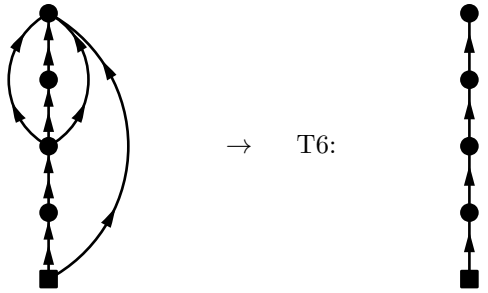
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{622}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5k_6}_{k_3k_4} \\ a_3 &= \epsilon^{k_7k_8}_{k_1k_5} \\ a_4 &= \epsilon_{k_2k_6k_7k_8} \end{aligned}$$

Diagram 305:

$$\begin{aligned} \mathrm{PO4.305} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_3}\Omega^{11}_{k_7k_4}\Omega^{04}_{k_7k_5k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_3}\Omega^{11}_{k_7k_4}\Omega^{04}_{k_7k_5k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2}\ \epsilon_{k_4k_2k_5k_6}\ \epsilon_{k_2k_5k_6k_7}} \end{aligned} \tag{623}$$



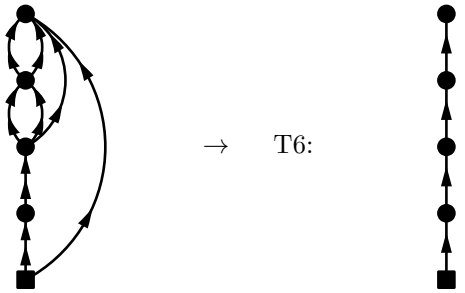
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{624}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3}_{k_1} \\ a_2 &= \epsilon^{k_4k_5k_6}_{k_3} \\ a_3 &= \epsilon^{k_7}_{k_4} \\ a_4 &= \epsilon_{k_2k_5k_6k_7} \end{aligned}$$

Diagram 306:

$$\begin{aligned} \mathrm{PO4.306} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_3}\Omega^{22}_{k_7k_8k_4k_5}\Omega^{04}_{k_7k_8k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{\tau} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{31}_{k_4k_5k_6k_3}\Omega^{22}_{k_7k_8k_4k_5}\Omega^{04}_{k_7k_8k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2}\ \epsilon_{k_4k_5k_2k_6}\ \epsilon_{k_2k_6k_7k_8}} \end{aligned} \tag{625}$$



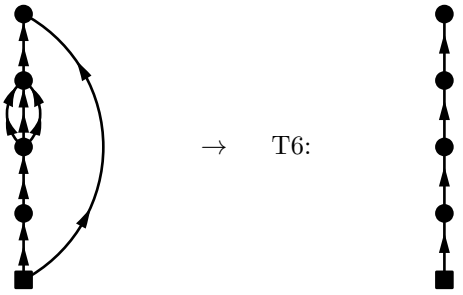
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{626}$$

$$
\begin{aligned}
a_1 &= \epsilon_{k_1}^{k_3} \\
a_2 &= \epsilon_{k_3}^{k_4 k_5 k_6} \\
a_3 &= \epsilon_{k_4 k_5}^{k_7 k_8} \\
a_4 &= \epsilon_{k_2 k_6 k_7 k_8}
\end{aligned}
$$

Diagram 307:

$$
\begin{aligned}
\text{PO4.307} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{11}_{k_3 k_1} \Omega^{31}_{k_4 k_5 k_6 k_3} \Omega^{13}_{k_7 k_4 k_5 k_6} \Omega^{02}_{k_7 k_2} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3}_{k_1}} e^{-\tau_2 \epsilon^{k_4 k_5}_{k_3}} \\
&= \frac{(-1)^4}{(3!)} \sum_{k_i} \frac{O^{20}_{k_1 k_2} \Omega^{11}_{k_3 k_1} \Omega^{31}_{k_4 k_5 k_6 k_3} \Omega^{13}_{k_7 k_4 k_5 k_6} \Omega^{02}_{k_7 k_2}}{\epsilon_{k_1 k_2}\ \epsilon_{k_3 k_2}\ \epsilon_{k_4 k_5 k_6 k_2}\ \epsilon_{k_2 k_7}}
\end{aligned} \tag{627}
$$

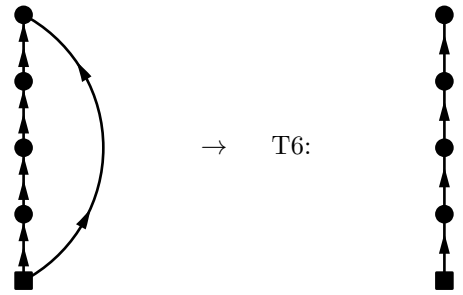


$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{628}
$$

$$
\begin{aligned}
a_1 &= \epsilon_{k_1}^{k_3} \\
a_2 &= \epsilon_{k_3}^{k_4 k_5 k_6} \\
a_3 &= \epsilon_{k_4 k_5 k_6}^{k_7} \\
a_4 &= \epsilon_{k_2 k_7}
\end{aligned}
$$

Diagram 308:

$$
\begin{aligned}
\text{PO4.308} &= \lim_{\tau\to\infty} (-1)^4 \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{11}_{k_3 k_1} \Omega^{11}_{k_4 k_3} \Omega^{11}_{k_5 k_4} \Omega^{02}_{k_5 k_2} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3}_{k_1}} e^{-\tau_2 \epsilon^{k_4}_{k_3}} e^{-\tau_3 \epsilon^{k_5}_{k_4}} e^{-} \\
&= (-1)^4 \sum_{k_i} \frac{O^{20}_{k_1 k_2} \Omega^{11}_{k_3 k_1} \Omega^{11}_{k_4 k_3} \Omega^{11}_{k_5 k_4} \Omega^{02}_{k_5 k_2}}{\epsilon_{k_1 k_2}\ \epsilon_{k_3 k_2}\ \epsilon_{k_4 k_2}\ \epsilon_{k_2 k_5}}
\end{aligned} \tag{629}
$$



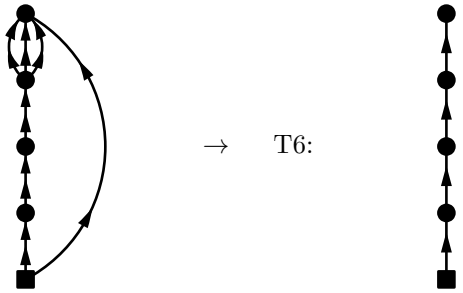
$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{630}
$$

$$
\begin{aligned}
a_1 &= \epsilon_{k_1}^{k_3} \\
a_2 &= \epsilon_{k_3}^{k_4} \\
a_3 &= \epsilon_{k_4}^{k_5} \\
a_4 &= \epsilon_{k_2 k_5}
\end{aligned}
$$

Diagram 309:

$$\text{PO4.309} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{11}_{k_4k_3}\Omega^{31}_{k_5k_6k_7k_4}\Omega^{04}_{k_5k_6k_7k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3}_{k_1}}e^{-\tau_2\epsilon^{k_4}_{k_3}}e$$

$$= \frac{(-1)^4}{(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{11}_{k_4k_3}\Omega^{31}_{k_5k_6k_7k_4}\Omega^{04}_{k_5k_6k_7k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2}\ \epsilon_{k_4k_2}\ \epsilon_{k_2k_5k_6k_7}} \tag{631}$$



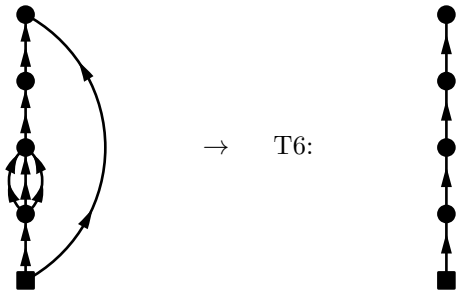
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{632}$$

$$a_1 = \epsilon^{k_3}_{k_1}$$
$$a_2 = \epsilon^{k_4}_{k_3}$$
$$a_3 = \epsilon^{k_5k_6k_7}_{k_4}$$
$$a_4 = \epsilon_{k_2k_5k_6k_7}$$

Diagram 310:

$$\text{PO4.310} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{13}_{k_6k_3k_4k_5}\Omega^{11}_{k_7k_6}\Omega^{02}_{k_7k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5}_{k_1}}e^{-\tau_2}$$

$$= \frac{(-1)^4}{(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{13}_{k_6k_3k_4k_5}\Omega^{11}_{k_7k_6}\Omega^{02}_{k_7k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_2}\ \epsilon_{k_6k_2}\ \epsilon_{k_2k_7}} \tag{633}$$



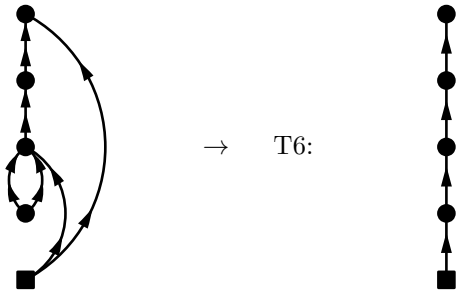
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{634}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6}_{k_3k_4k_5}$$
$$a_3 = \epsilon^{k_7}_{k_6}$$
$$a_4 = \epsilon_{k_2k_7}$$

Diagram 311:

$$\text{PO4.311} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{13}_{k_5k_3k_4k_1}\Omega^{11}_{k_6k_5}\Omega^{02}_{k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e^{-\tau_2\epsilon^{k_5}_{k_1k_3k_4}}$$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{13}_{k_5k_3k_4k_1}\Omega^{11}_{k_6k_5}\Omega^{02}_{k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_2}\ \epsilon_{k_5k_2}\ \epsilon_{k_2k_6}} \tag{635}$$



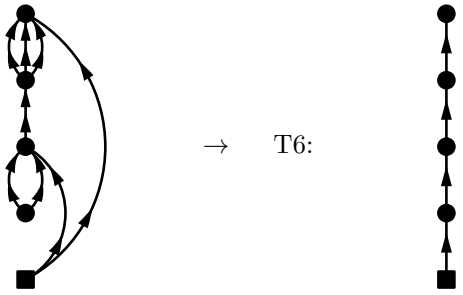
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{636}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5}_{k_1k_3k_4} \\ a_3 &= \epsilon^{k_6}_{k_5} \\ a_4 &= \epsilon_{k_2k_6} \end{aligned}$$

Diagram 312:

$$\begin{aligned} \mathrm{PO4.312} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{13}_{k_5k_3k_4k_1}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{04}_{k_6k_7k_8k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e \\ &= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{13}_{k_5k_3k_4k_1}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{04}_{k_6k_7k_8k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_2}\ \epsilon_{k_5k_2}\ \epsilon_{k_2k_6k_7k_8}} \end{aligned} \tag{637}$$



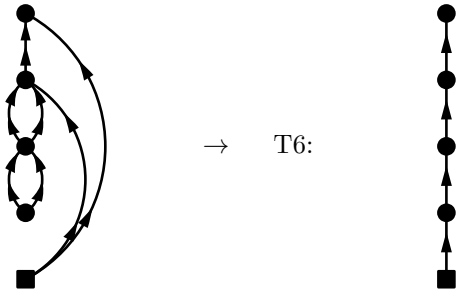
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{638}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5}_{k_1k_3k_4} \\ a_3 &= \epsilon^{k_6k_7k_8}_{k_5} \\ a_4 &= \epsilon_{k_2k_6k_7k_8} \end{aligned}$$

Diagram 313:

$$\begin{aligned} \mathrm{PO4.313} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_4}\Omega^{13}_{k_7k_5k_6k_1}\Omega^{02}_{k_7k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e^{-\tau_2\epsilon^{k_5}_{k_1k_3k_4}} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_4}\Omega^{13}_{k_7k_5k_6k_1}\Omega^{02}_{k_7k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_1k_2}\ \epsilon_{k_1k_5k_6k_2}\ \epsilon_{k_2k_7}} \end{aligned} \tag{639}$$



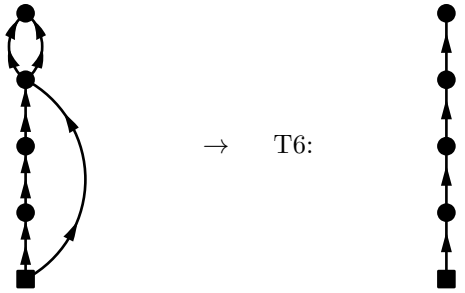
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{640}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5k_6}_{k_3k_4} \\ a_3 &= \epsilon^{k_7}_{k_1k_5k_6} \\ a_4 &= \epsilon_{k_2k_7} \end{aligned}$$

Diagram 314:

$$\begin{aligned} \text{PO4.314} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{11}_{k_4k_3}\Omega^{22}_{k_5k_6k_4k_2}\Omega^{02}_{k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3}_{k_1}}e^{-\tau_2\epsilon^{k_4}_{k_3}}e^{-\tau_3\epsilon} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{11}_{k_4k_3}\Omega^{22}_{k_5k_6k_4k_2}\Omega^{02}_{k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2}\ \epsilon_{k_2k_4}\ \epsilon_{k_5k_6}} \end{aligned} \tag{641}$$



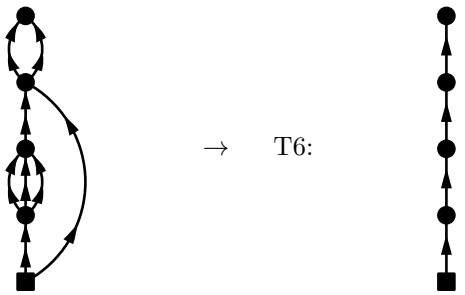
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{642}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3}_{k_1} \\ a_2 &= \epsilon^{k_4}_{k_3} \\ a_3 &= \epsilon^{k_5k_6}_{k_2k_4} \\ a_4 &= \epsilon_{k_5k_6} \end{aligned}$$

Diagram 315:

$$\begin{aligned} \text{PO4.315} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{13}_{k_6k_3k_4k_5}\Omega^{22}_{k_7k_8k_6k_2}\Omega^{02}_{k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5}_{k_1}} \\ &= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{13}_{k_6k_3k_4k_5}\Omega^{22}_{k_7k_8k_6k_2}\Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_2}\ \epsilon_{k_2k_6}\ \epsilon_{k_7k_8}} \end{aligned} \tag{643}$$



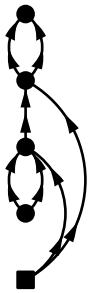
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{644}$$

$$a_1 = \epsilon^{k_3 k_4 k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6}_{k_3 k_4 k_5}$$
$$a_3 = \epsilon^{k_7 k_8}_{k_2 k_6}$$
$$a_4 = \epsilon_{k_7 k_8}$$

Diagram 316:

$$\text{PO4.316} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{13}_{k_5 k_3 k_4 k_1} \Omega^{22}_{k_6 k_7 k_5 k_2} \Omega^{02}_{k_6 k_7} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3 k_4}} e^{-\tau_2 \epsilon^{k_5}_{k_1}}$$
$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{13}_{k_5 k_3 k_4 k_1} \Omega^{22}_{k_6 k_7 k_5 k_2} \Omega^{02}_{k_6 k_7}}{\epsilon_{k_1 k_2}\ \epsilon_{k_1 k_3 k_4 k_2}\ \epsilon_{k_2 k_5}\ \epsilon_{k_6 k_7}} \tag{645}$$


$\rightarrow$ T6:


$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{646}$$

$$a_1 = \epsilon^{k_3 k_4}$$
$$a_2 = \epsilon^{k_5}_{k_1 k_3 k_4}$$
$$a_3 = \epsilon^{k_6 k_7}_{k_2 k_5}$$
$$a_4 = \epsilon_{k_6 k_7}$$

Diagram 317:

$$\text{PO4.317} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{11}_{k_3 k_1} \Omega^{22}_{k_4 k_5 k_3 k_2} \Omega^{22}_{k_6 k_7 k_4 k_5} \Omega^{02}_{k_6 k_7} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3}_{k_1}} e^{-\tau_2 \epsilon^{k_4 k_5}_{k_2 k_3}}$$
$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1 k_2} \Omega^{11}_{k_3 k_1} \Omega^{22}_{k_4 k_5 k_3 k_2} \Omega^{22}_{k_6 k_7 k_4 k_5} \Omega^{02}_{k_6 k_7}}{\epsilon_{k_1 k_2}\ \epsilon_{k_2 k_3}\ \epsilon_{k_4 k_5}\ \epsilon_{k_6 k_7}} \tag{647}$$


$\rightarrow$ T6:

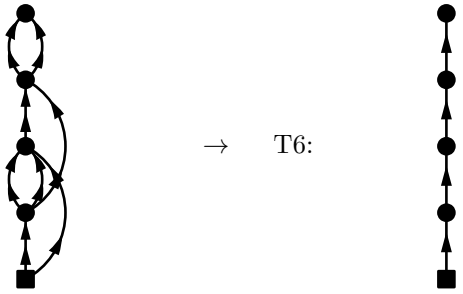

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{648}$$

$$a_1 = \epsilon^{k_3}_{k_1}$$
$$a_2 = \epsilon^{k_4 k_5}_{k_2 k_3}$$
$$a_3 = \epsilon^{k_6 k_7}_{k_4 k_5}$$
$$a_4 = \epsilon_{k_6 k_7}$$

Diagram 318:

$$\text{PO4.318} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{13}_{k_6k_3k_4k_2}\Omega^{22}_{k_7k_8k_6k_5}\Omega^{02}_{k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{13}_{k_6k_3k_4k_2}\Omega^{22}_{k_7k_8k_6k_5}\Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_5k_6}\ \epsilon_{k_7k_8}} \tag{649}$$



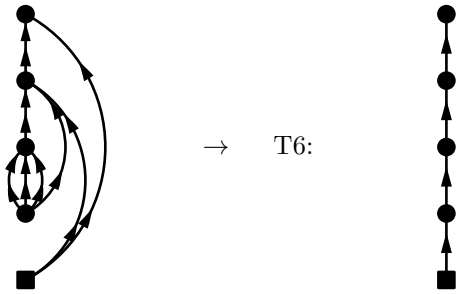
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{650}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6}_{k_2k_3k_4}$$
$$a_3 = \epsilon^{k_7k_8}_{k_5k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 319:

$$\text{PO4.319} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_5}\Omega^{13}_{k_8k_7k_6k_1}\Omega^{02}_{k_8k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e$$

$$= \frac{(-1)^4}{(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_5}\Omega^{13}_{k_8k_7k_6k_1}\Omega^{02}_{k_8k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_1k_6k_2}\ \epsilon_{k_1k_6k_7k_2}\ \epsilon_{k_2k_8}} \tag{651}$$



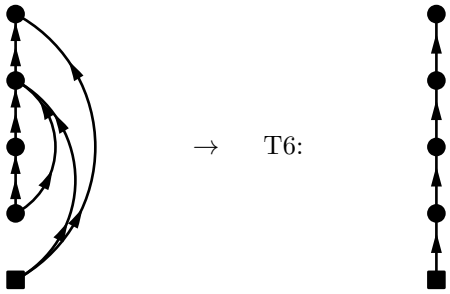
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{652}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_3k_4k_5}$$
$$a_3 = \epsilon^{k_8}_{k_1k_6k_7}$$
$$a_4 = \epsilon_{k_2k_8}$$

Diagram 320:

$$\text{PO4.320} = \lim_{\tau\to\infty} (-1)^4 \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{11}_{k_5k_3}\Omega^{13}_{k_6k_5k_4k_1}\Omega^{02}_{k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e$$

$$= (-1)^4 \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{11}_{k_5k_3}\Omega^{13}_{k_6k_5k_4k_1}\Omega^{02}_{k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_4k_2}\ \epsilon_{k_1k_4k_5k_2}\ \epsilon_{k_2k_6}} \tag{653}$$

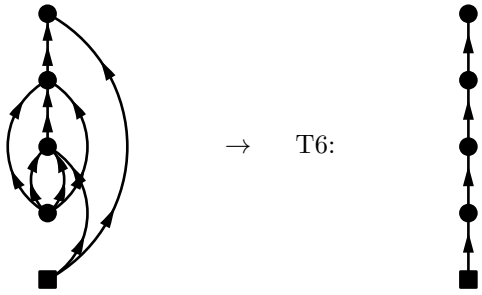


$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{654}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5}_{k_3} \\ a_3 &= \epsilon^{k_6}_{k_1k_4k_5} \\ a_4 &= \epsilon_{k_2k_6} \end{aligned}$$

Diagram 321:

$$\begin{aligned} \text{PO4.321} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{13}_{k_8k_7k_5k_6}\Omega^{02}_{k_8k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{13}_{k_8k_7k_5k_6}\Omega^{02}_{k_8k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_5k_6k_2}\ \epsilon_{k_5k_6k_7k_2}\ \epsilon_{k_2k_8}} \end{aligned} \tag{655}$$

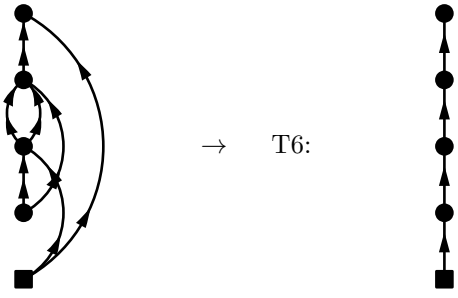


$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{656}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon^{k_7}_{k_1k_3k_4} \\ a_3 &= \epsilon^{k_8}_{k_5k_6k_7} \\ a_4 &= \epsilon_{k_2k_8} \end{aligned}$$

Diagram 322:

$$\begin{aligned} \text{PO4.322} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{13}_{k_7k_5k_6k_4}\Omega^{02}_{k_7k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau} \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{13}_{k_7k_5k_6k_4}\Omega^{02}_{k_7k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_2}\ \epsilon_{k_4k_5k_6k_2}\ \epsilon_{k_2k_7}} \end{aligned} \tag{657}$$

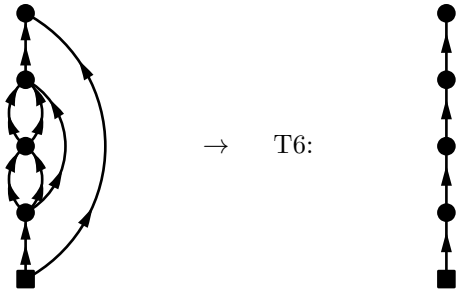


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{658}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon^{k_5k_6}_{k_1k_3} \\ a_3 &= \epsilon^{k_7}_{k_4k_5k_6} \\ a_4 &= \epsilon_{k_2k_7} \end{aligned}$$

Diagram 323:

$$\begin{aligned} \mathrm{PO4.323} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{31}_{k_3k_4k_5k_1} \Omega^{22}_{k_6k_7k_3k_4} \Omega^{13}_{k_8k_6k_7k_5} \Omega^{02}_{k_8k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{31}_{k_3k_4k_5k_1} \Omega^{22}_{k_6k_7k_3k_4} \Omega^{13}_{k_8k_6k_7k_5} \Omega^{02}_{k_8k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_2}\ \epsilon_{k_5k_6k_7k_2}\ \epsilon_{k_2k_8}} \end{aligned} \tag{659}$$

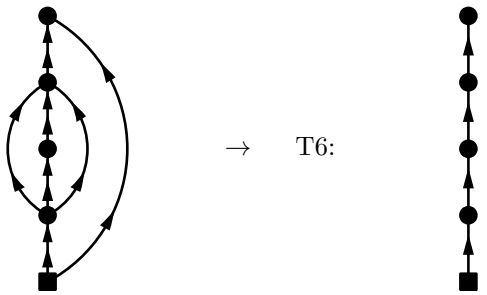


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{660}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\ a_2 &= \epsilon^{k_6k_7}_{k_3k_4} \\ a_3 &= \epsilon^{k_8}_{k_5k_6k_7} \\ a_4 &= \epsilon_{k_2k_8} \end{aligned}$$

Diagram 324:

$$\begin{aligned} \mathrm{PO4.324} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2} \Omega^{31}_{k_3k_4k_5k_1} \Omega^{11}_{k_6k_3} \Omega^{13}_{k_7k_6k_4k_5} \Omega^{02}_{k_7k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2} \Omega^{31}_{k_3k_4k_5k_1} \Omega^{11}_{k_6k_3} \Omega^{13}_{k_7k_6k_4k_5} \Omega^{02}_{k_7k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_2}\ \epsilon_{k_4k_5k_6k_2}\ \epsilon_{k_2k_7}} \end{aligned} \tag{661}$$

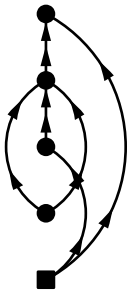


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{662}$$

$$
\begin{aligned}
a_1 &= \epsilon_{k_1}^{k_3k_4k_5} \\
a_2 &= \epsilon_{k_3}^{k_6} \\
a_3 &= \epsilon_{k_4k_5k_6}^{k_7} \\
a_4 &= \epsilon_{k_2k_7}
\end{aligned}
$$

Diagram 325:

$$
\begin{aligned}
\text{PO4.325} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{13}_{k_6k_5k_3k_4}\Omega^{02}_{k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e^{-\tau_2\epsilon^{k_5}_{k_1}}e^{-\tau} \\
&= \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{13}_{k_6k_5k_3k_4}\Omega^{02}_{k_6k_2} \left[\frac{1}{\epsilon_{k_5k_2}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_2}\ \epsilon_{k_2k_6}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_2}\ \epsilon_{k_3k_4k_5k_2}\ \epsilon_{k_2k_6}}\right]
\end{aligned} \tag{663}
$$



$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{664}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3k_4} \\
a_2 &= \epsilon_{k_1}^{k_5} \\
a_3 &= \epsilon_{k_3k_4k_5}^{k_6} \\
a_4 &= \epsilon_{k_2k_6}
\end{aligned}
$$

Diagram 326:

$$
\begin{aligned}
\text{PO4.326} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{11}_{k_4k_2}\Omega^{22}_{k_5k_6k_4k_3}\Omega^{02}_{k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3}_{k_1}}e^{-\tau_2\epsilon^{k_4}_{k_2}}e^{-\tau} \\
&= \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{11}_{k_4k_2}\Omega^{22}_{k_5k_6k_4k_3}\Omega^{02}_{k_5k_6} \left[\frac{1}{\epsilon_{k_1k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6}}\right]
\end{aligned} \tag{665}
$$

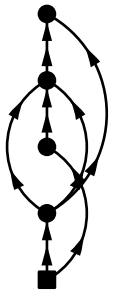
$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{666}
$$

$$
\begin{aligned}
a_1 &= \epsilon_{k_1}^{k_3} \\
a_2 &= \epsilon_{k_2}^{k_4} \\
a_3 &= \epsilon_{k_3 k_4}^{k_5 k_6} \\
a_4 &= \epsilon_{k_5 k_6}
\end{aligned}
$$

Diagram 327:

$$
\begin{aligned}
\text{PO4.327} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{11}_{k_6 k_2} \Omega^{13}_{k_7 k_6 k_3 k_4} \Omega^{02}_{k_7 k_5} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau} \\
&= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{11}_{k_6 k_2} \Omega^{13}_{k_7 k_6 k_3 k_4} \Omega^{02}_{k_7 k_5} \left[\frac{1}{\epsilon_{k_1 k_6}\ \epsilon_{k_1 k_2}\ \epsilon_{k_3 k_4 k_6 k_5}\ \epsilon_{k_5 k_7}} + \frac{1}{\epsilon_{k_1 k_2}\ \epsilon_{k_2 k_3 k_4 k_5}\ \epsilon_{k_3 k_4 k_6 k_5}\ \epsilon_{k_5 k_7}} \right]
\end{aligned} \tag{667}
$$



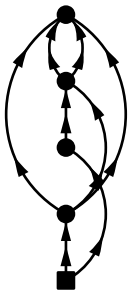
$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{668}
$$

$$
\begin{aligned}
a_1 &= \epsilon_{k_1}^{k_3 k_4 k_5} \\
a_2 &= \epsilon_{k_2}^{k_6} \\
a_3 &= \epsilon_{k_3 k_4 k_6}^{k_7} \\
a_4 &= \epsilon_{k_5 k_7}
\end{aligned}
$$

Diagram 328:

$$
\begin{aligned}
\text{PO4.328} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{11}_{k_6 k_2} \Omega^{22}_{k_7 k_8 k_6 k_3} \Omega^{04}_{k_7 k_8 k_4 k_5} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) \\
&= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{11}_{k_6 k_2} \Omega^{22}_{k_7 k_8 k_6 k_3} \Omega^{04}_{k_7 k_8 k_4 k_5} \left[\frac{1}{\epsilon_{k_1 k_6}\ \epsilon_{k_1 k_2}\ \epsilon_{k_3 k_6 k_4 k_5}\ \epsilon_{k_4 k_5 k_7 k_8}} + \frac{1}{\epsilon_{k_1 k_2}\ \epsilon_{k_2 k_3 k_4 k_5}\ \epsilon_{k_3 k_6 k_4 k_5}\ \epsilon_{k_4}} \right.
\end{aligned} \tag{669}
$$



$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{670}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3 k_4 k_5}_{k_1} \\
a_2 &= \epsilon^{k_6}_{k_2} \\
a_3 &= \epsilon^{k_7 k_8}_{k_3 k_6} \\
a_4 &= \epsilon_{k_4 k_5 k_7 k_8}
\end{aligned}
$$

Diagram 329:

$$
\begin{aligned}
\text{PO4.329} &= \lim_{\tau\to\infty} -(-1)^4 \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{13}_{k_6 k_5 k_3 k_2} \Omega^{02}_{k_6 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3 k} \\
&= -(-1)^4 \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{13}_{k_6 k_5 k_3 k_2} \Omega^{02}_{k_6 k_4} \left[\frac{1}{\epsilon_{k_2 k_5}\ \epsilon_{k_1 k_2}\ \epsilon_{k_2 k_3 k_5 k_4}\ \epsilon_{k_4 k_6}} + \frac{1}{\epsilon_{k_1 k_2}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_2 k_3 k_5 k_4}\ \epsilon_{k_4 k_6}} \right]
\end{aligned} \tag{671}
$$

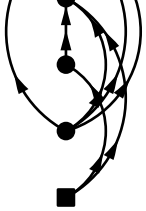
$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{672}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3 k_4} \\
a_2 &= \epsilon^{k_5}_{k_1} \\
a_3 &= \epsilon^{k_6}_{k_2 k_3 k_5} \\
a_4 &= \epsilon_{k_4 k_6}
\end{aligned}
$$

Diagram 330:

$$
\begin{aligned}
\text{PO4.330} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{40}_{k_3 k_4 k_5 k_6} \Omega^{11}_{k_7 k_1} \Omega^{13}_{k_8 k_7 k_3 k_2} \Omega^{04}_{k_8 k_4 k_5 k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) \\
&= \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{40}_{k_3 k_4 k_5 k_6} \Omega^{11}_{k_7 k_1} \Omega^{13}_{k_8 k_7 k_3 k_2} \Omega^{04}_{k_8 k_4 k_5 k_6} \left[\frac{1}{\epsilon_{k_2 k_7}\ \epsilon_{k_1 k_2}\ \epsilon_{k_2 k_3 k_7 k_4 k_5 k_6}\ \epsilon_{k_4 k_5 k_6 k_8}} + \frac{1}{\epsilon_{k_1 k_2}\ \epsilon_{k_1 k_2 k_3 k_4 k_5 k_6}\ \epsilon_{k_2 k_3}} \right.
\end{aligned} \tag{673}
$$



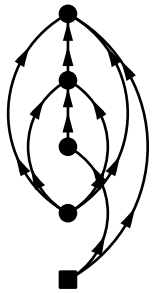
$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{674}
$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1}$$
$$a_3 = \epsilon^{k_8}_{k_2k_3k_7}$$
$$a_4 = \epsilon_{k_4k_5k_6k_8}$$

Diagram 331:

$$\text{PO4.331} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{11}_{k_7k_1}\Omega^{13}_{k_8k_7k_3k_4}\Omega^{04}_{k_8k_5k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$
$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{11}_{k_7k_1}\Omega^{13}_{k_8k_7k_3k_4}\Omega^{04}_{k_8k_5k_6k_2}\left[\frac{1}{\epsilon_{k_7k_2}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_7k_2k_5k_6}\ \epsilon_{k_2k_5k_6k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_2k_5k_6}\ \epsilon_{k_3k_4k}}\right. \tag{675}$$



$\rightarrow$ T13:

$$\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{676}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1}$$
$$a_3 = \epsilon^{k_8}_{k_3k_4k_7}$$
$$a_4 = \epsilon_{k_2k_5k_6k_8}$$

Diagram 332:

$$\text{PO4.332} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{22}_{k_6k_7k_5k_3}\Omega^{04}_{k_6k_7k_4k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$
$$= \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{22}_{k_6k_7k_5k_3}\Omega^{04}_{k_6k_7k_4k_2}\left[\frac{1}{\epsilon_{k_5k_2}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_5k_2k_4}\ \epsilon_{k_2k_4k_6k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4}\ \epsilon_{k_3k_5k_2k_4}\ \epsilon_{k_2k_4k_6k}}\right. \tag{677}$$

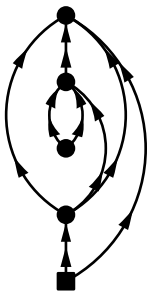
$\rightarrow$ T13:

$$\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{678}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3 k_4} \\
a_2 &= \epsilon^{k_5}_{k_1} \\
a_3 &= \epsilon^{k_6 k_7}_{k_3 k_5} \\
a_4 &= \epsilon_{k_2 k_4 k_6 k_7}
\end{aligned}
$$

Diagram 333:

$$
\begin{aligned}
\text{PO4.333} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{20}_{k_6 k_7} \Omega^{13}_{k_8 k_6 k_7 k_3} \Omega^{04}_{k_8 k_4 k_5 k_2} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{\cdot} \\
&= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{20}_{k_6 k_7} \Omega^{13}_{k_8 k_6 k_7 k_3} \Omega^{04}_{k_8 k_4 k_5 k_2} \left[\frac{1}{\epsilon_{k_1 k_6 k_7 k_2}\ \epsilon_{k_1 k_2}\ \epsilon_{k_3 k_6 k_7 k_2 k_4 k_5}\ \epsilon_{k_2 k_4 k_5 k_8}} + \frac{1}{\epsilon_{k_1 k_2}\ \epsilon_{k_3 k_2 k_4 k_5}\ \epsilon_{k_3 k_6 k}} \right.
\end{aligned}
\tag{679}
$$



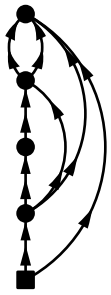
$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{680}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3 k_4 k_5}_{k_1} \\
a_2 &= \epsilon^{k_6 k_7} \\
a_3 &= \epsilon^{k_8}_{k_3 k_6 k_7} \\
a_4 &= \epsilon_{k_2 k_4 k_5 k_8}
\end{aligned}
$$

Diagram 334:

$$
\begin{aligned}
\text{PO4.334} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{11}_{k_6 k_3} \Omega^{22}_{k_7 k_8 k_6 k_4} \Omega^{04}_{k_7 k_8 k_5 k_2} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\\
&= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{11}_{k_6 k_3} \Omega^{22}_{k_7 k_8 k_6 k_4} \Omega^{04}_{k_7 k_8 k_5 k_2}}{\epsilon_{k_1 k_2}\ \epsilon_{k_3 k_4 k_2 k_5}\ \epsilon_{k_4 k_6 k_2 k_5}\ \epsilon_{k_2 k_5 k_7 k_8}}
\end{aligned}
\tag{681}
$$



$\rightarrow$ T6:

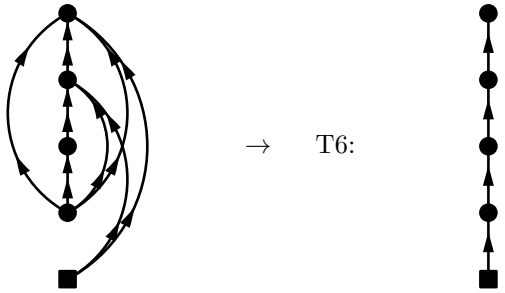
$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{682}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_3 k_4 k_5}_{k_1} \\
a_2 &= \epsilon^{k_6}_{k_3} \\
a_3 &= \epsilon^{k_7 k_8}_{k_4 k_6} \\
a_4 &= \epsilon_{k_2 k_5 k_7 k_8}
\end{aligned}
$$

Diagram 335:

$$\text{PO4.335} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{11}_{k_7k_3}\Omega^{13}_{k_8k_7k_4k_1}\Omega^{04}_{k_8k_5k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta($$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{11}_{k_7k_3}\Omega^{13}_{k_8k_7k_4k_1}\Omega^{04}_{k_8k_5k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_1k_4k_2k_5k_6}\ \epsilon_{k_1k_4k_7k_2k_5k_6}\ \epsilon_{k_2k_5k_6k_8}} \tag{683}$$



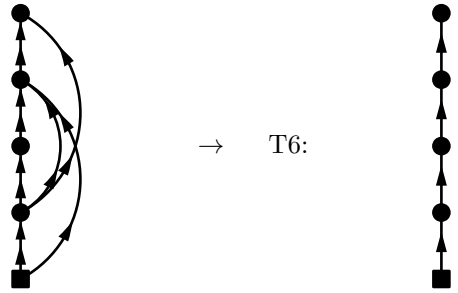
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{684}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_3}$$
$$a_3 = \epsilon^{k_8}_{k_1k_4k_7}$$
$$a_4 = \epsilon_{k_2k_5k_6k_8}$$

Diagram 336:

$$\text{PO4.336} = \lim_{\tau\to\infty} -(-1)^4 \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{11}_{k_6k_3}\Omega^{13}_{k_7k_6k_4k_2}\Omega^{02}_{k_7k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4$$

$$= -(-1)^4 \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{11}_{k_6k_3}\Omega^{13}_{k_7k_6k_4k_2}\Omega^{02}_{k_7k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_2k_4k_6k_5}\ \epsilon_{k_5k_7}} \tag{685}$$



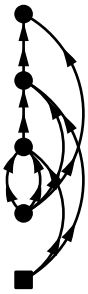
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{686}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6}_{k_3}$$
$$a_3 = \epsilon^{k_7}_{k_2k_4k_6}$$
$$a_4 = \epsilon_{k_5k_7}$$

Diagram 337:

$$\text{PO4.337} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{13}_{k_8k_7k_5k_2}\Omega^{02}_{k_8k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{13}_{k_8k_7k_5k_2}\Omega^{02}_{k_8k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_2k_5k_6}\ \epsilon_{k_2k_5k_7k_6}\ \epsilon_{k_6k_8}} \tag{687}$$



$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{688}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon^{k_7}_{k_1k_3k_4} \\ a_3 &= \epsilon^{k_8}_{k_2k_5k_7} \\ a_4 &= \epsilon_{k_6k_8} \end{aligned}$$

Diagram 338:

$$\begin{aligned} \text{PO4.338} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_2}\Omega^{13}_{k_8k_6k_7k_4}\Omega^{02}_{k_8k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_2}\Omega^{13}_{k_8k_6k_7k_4}\Omega^{02}_{k_8k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_4k_6k_7k_5}\ \epsilon_{k_5k_8}} \end{aligned} \tag{689}$$

$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{690}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\ a_2 &= \epsilon^{k_6k_7}_{k_2k_3} \\ a_3 &= \epsilon^{k_8}_{k_4k_6k_7} \\ a_4 &= \epsilon_{k_5k_8} \end{aligned}$$

Diagram 339:

$$\begin{aligned} \text{PO4.339} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{13}_{k_6k_3k_4k_2}\Omega^{11}_{k_7k_6}\Omega^{02}_{k_7k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau} \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{13}_{k_6k_3k_4k_2}\Omega^{11}_{k_7k_6}\Omega^{02}_{k_7k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3k_4k_5}\ \epsilon_{k_6k_5}\ \epsilon_{k_5k_7}} \end{aligned} \tag{691}$$

$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{692}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3k_4k_5} \\ a_2 &= \epsilon_{k_2k_3k_4}^{k_6} \\ a_3 &= \epsilon_{k_6}^{k_7} \\ a_4 &= \epsilon_{k_5k_7} \end{aligned}$$

Diagram 340:

$$\begin{aligned} \mathrm{PO4.340} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{13}_{k_7k_5k_6k_2}\Omega^{02}_{k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{13}_{k_7k_5k_6k_2}\Omega^{02}_{k_7k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4}\ \epsilon_{k_2k_5k_6k_4}\ \epsilon_{k_4k_7}} \end{aligned} \tag{693}$$

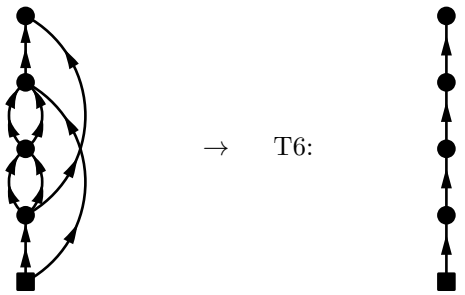
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{694}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon_{k_1k_3}^{k_5k_6} \\ a_3 &= \epsilon_{k_2k_5k_6}^{k_7} \\ a_4 &= \epsilon_{k_4k_7} \end{aligned}$$

Diagram 341:

$$\begin{aligned} \mathrm{PO4.341} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{13}_{k_8k_6k_7k_2}\Omega^{02}_{k_8k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{22}_{k_6k_7k_3k_4}\Omega^{13}_{k_8k_6k_7k_2}\Omega^{02}_{k_8k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_2k_5}\ \epsilon_{k_2k_6k_7k_5}\ \epsilon_{k_5k_8}} \end{aligned} \tag{695}$$



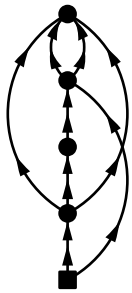
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{696}$$

$$a_1 = \epsilon^{k_3 k_4 k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6 k_7}_{k_3 k_4}$$
$$a_3 = \epsilon^{k_8}_{k_2 k_6 k_7}$$
$$a_4 = \epsilon_{k_5 k_8}$$

Diagram 342:

$$\text{PO4.342} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{11}_{k_6 k_3} \Omega^{22}_{k_7 k_8 k_6 k_2} \Omega^{04}_{k_7 k_8 k_4 k_5} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-}$$
$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{11}_{k_6 k_3} \Omega^{22}_{k_7 k_8 k_6 k_2} \Omega^{04}_{k_7 k_8 k_4 k_5}}{\epsilon_{k_1 k_2}\ \epsilon_{k_3 k_2 k_4 k_5}\ \epsilon_{k_2 k_6 k_4 k_5}\ \epsilon_{k_4 k_5 k_7 k_8}} \tag{697}$$



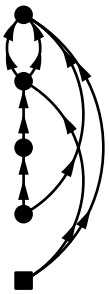
$\to$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{698}$$

$$a_1 = \epsilon^{k_3 k_4 k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6}_{k_3}$$
$$a_3 = \epsilon^{k_7 k_8}_{k_2 k_6}$$
$$a_4 = \epsilon_{k_4 k_5 k_7 k_8}$$

Diagram 343:

$$\text{PO4.343} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{11}_{k_5 k_3} \Omega^{22}_{k_6 k_7 k_5 k_1} \Omega^{04}_{k_6 k_7 k_4 k_2} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau}$$
$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{11}_{k_5 k_3} \Omega^{22}_{k_6 k_7 k_5 k_1} \Omega^{04}_{k_6 k_7 k_4 k_2}}{\epsilon_{k_1 k_2}\ \epsilon_{k_3 k_1 k_2 k_4}\ \epsilon_{k_1 k_5 k_2 k_4}\ \epsilon_{k_2 k_4 k_6 k_7}} \tag{699}$$



$\to$ T6:

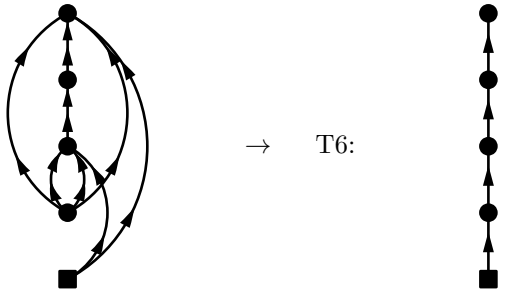
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{700}$$

$$a_1 = \epsilon^{k_3 k_4}$$
$$a_2 = \epsilon^{k_5}_{k_3}$$
$$a_3 = \epsilon^{k_6 k_7}_{k_1 k_5}$$
$$a_4 = \epsilon_{k_2 k_4 k_6 k_7}$$

Diagram 344:

$$\text{PO4.344} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{11}_{k_8k_7}\Omega^{04}_{k_8k_5k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{13}_{k_7k_3k_4k_1}\Omega^{11}_{k_8k_7}\Omega^{04}_{k_8k_5k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_2k_5k_6}\ \epsilon_{k_7k_2k_5k_6}\ \epsilon_{k_2k_5k_6k_8}} \tag{701}$$



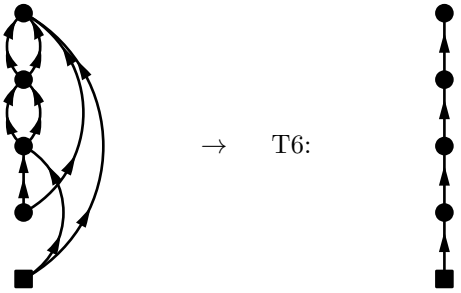
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{702}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1k_3k_4}$$
$$a_3 = \epsilon^{k_8}_{k_7}$$
$$a_4 = \epsilon_{k_2k_5k_6k_8}$$

Diagram 345:

$$\text{PO4.345} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{04}_{k_7k_8k_4k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{22}_{k_5k_6k_3k_1}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{04}_{k_7k_8k_4k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_2k_4}\ \epsilon_{k_5k_6k_2k_4}\ \epsilon_{k_2k_4k_7k_8}} \tag{703}$$



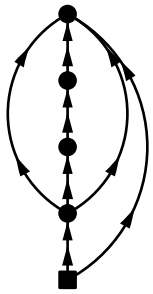
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{704}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon^{k_5k_6}_{k_1k_3}$$
$$a_3 = \epsilon^{k_7k_8}_{k_5k_6}$$
$$a_4 = \epsilon_{k_2k_4k_7k_8}$$

Diagram 346:

$$\text{PO4.346} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{11}_{k_6k_3}\Omega^{11}_{k_7k_6}\Omega^{04}_{k_7k_4k_5k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{11}_{k_6k_3}\Omega^{11}_{k_7k_6}\Omega^{04}_{k_7k_4k_5k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_2k_4k_5}\ \epsilon_{k_6k_2k_4k_5}\ \epsilon_{k_2k_4k_5k_7}} \tag{705}$$



$\rightarrow$ T6:

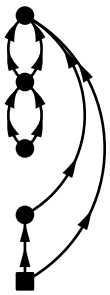
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{706}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3k_4k_5} \\ a_2 &= \epsilon_{k_3}^{k_6} \\ a_3 &= \epsilon_{k_6}^{k_7} \\ a_4 &= \epsilon_{k_2k_4k_5k_7} \end{aligned}$$

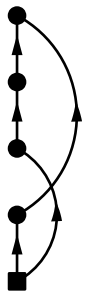
Diagram 347:

$$\mathrm{PO4.347} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{20}_{k_4k_5}\Omega^{22}_{k_6k_7k_4k_5}\Omega^{04}_{k_6k_7k_3k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3}_{k_1}}e^{-\tau_2\epsilon^{k_4k_5}}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{20}_{k_4k_5}\Omega^{22}_{k_6k_7k_4k_5}\Omega^{04}_{k_6k_7k_3k_2} \left[\frac{1}{\epsilon_{k_1k_2k_6k_7}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_4k_5k_2}\ \epsilon_{k_2k_3k_6k_7}} + \frac{1}{\epsilon_{k_1k_4k_5k_2}\ \epsilon_{k_1k_2}\ \epsilon_{k_4k_5k_2k_3}\ \epsilon_{k_2k_3}}\right. \tag{707}$$



$\rightarrow$ T12:



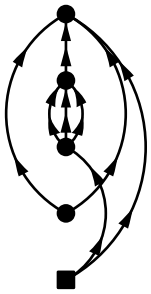
$$\mathrm{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{708}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3} \\ a_2 &= \epsilon^{k_4k_5} \\ a_3 &= \epsilon_{k_4k_5}^{k_6k_7} \\ a_4 &= \epsilon_{k_2k_3k_6k_7} \end{aligned}$$

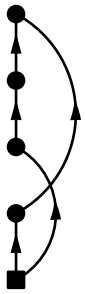
Diagram 348:

$$\mathrm{PO4.348} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_6k_7}\Omega^{04}_{k_8k_3k_4k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_6k_7}\Omega^{04}_{k_8k_3k_4k_2} \left[\frac{1}{\epsilon_{k_2k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_6k_7k_2}\ \epsilon_{k_2k_3k_4k_8}} + \frac{1}{\epsilon_{k_5k_6k_7k_2}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_6k_7k_2k_3k_4}}\right. \tag{709}$$



$\rightarrow$ T12:

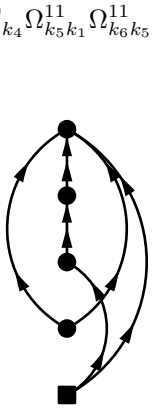


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{710}$$

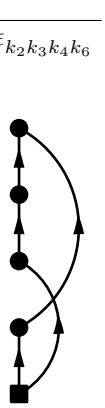
$$\begin{aligned} a_1 &= \epsilon^{k_3 k_4} \\ a_2 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\ a_3 &= \epsilon^{k_8}_{k_5 k_6 k_7} \\ a_4 &= \epsilon_{k_2 k_3 k_4 k_8} \end{aligned}$$

Diagram 349:

$$\begin{aligned} \text{PO4.349} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{11}_{k_6 k_5} \Omega^{04}_{k_6 k_3 k_4 k_2} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3 k_4}} e^{-\tau_2 \epsilon^{k_5}_{k_1}} e^{-\tau} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{11}_{k_6 k_5} \Omega^{04}_{k_6 k_3 k_4 k_2} \left[\frac{1}{\epsilon_{k_2 k_6}\ \epsilon_{k_1 k_2}\ \epsilon_{k_5 k_2}\ \epsilon_{k_2 k_3 k_4 k_6}} + \frac{1}{\epsilon_{k_5 k_2}\ \epsilon_{k_1 k_2}\ \epsilon_{k_5 k_2 k_3 k_4}\ \epsilon_{k_2 k_3 k_4 k_6}} + \frac{1}{\epsilon_{k_1 k_2}\ \epsilon} \right. \end{aligned} \tag{711}$$



$\rightarrow$ T12:

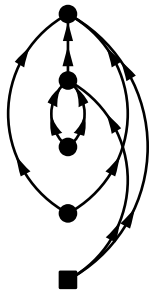


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{712}$$

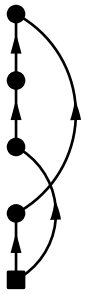
$$\begin{aligned} a_1 &= \epsilon^{k_3 k_4} \\ a_2 &= \epsilon^{k_5}_{k_1} \\ a_3 &= \epsilon^{k_6}_{k_5} \\ a_4 &= \epsilon_{k_2 k_3 k_4 k_6} \end{aligned}$$

Diagram 350:

$$\begin{aligned} \text{PO4.350} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_5 k_6 k_1} \Omega^{04}_{k_7 k_3 k_4 k_2} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3 k_4}} e^{-\tau_2 \epsilon^{k_5}} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_5 k_6 k_1} \Omega^{04}_{k_7 k_3 k_4 k_2} \left[\frac{1}{\epsilon_{k_2 k_7}\ \epsilon_{k_1 k_2}\ \epsilon_{k_1 k_5 k_6 k_2}\ \epsilon_{k_2 k_3 k_4 k_7}} + \frac{1}{\epsilon_{k_1 k_5 k_6 k_2}\ \epsilon_{k_1 k_2}\ \epsilon_{k_1 k_5 k_6 k_2 k_3 k_4}\ \epsilon_{k_2 k_3} \right. \end{aligned} \tag{713}$$



$\rightarrow$ T12:



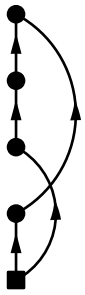
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{714}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3 k_4} \\ a_2 &= \epsilon^{k_5 k_6} \\ a_3 &= \epsilon^{k_7}_{k_1 k_5 k_6} \\ a_4 &= \epsilon_{k_2 k_3 k_4 k_7} \end{aligned}$$

Diagram 351:

$$\begin{aligned} \text{PO4.351} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{11}_{k_3 k_1} \Omega^{20}_{k_4 k_5} \Omega^{13}_{k_6 k_4 k_5 k_2} \Omega^{02}_{k_6 k_3} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3}_{k_1}} e^{-\tau_2 \epsilon^{k_4 k_5}} e \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{11}_{k_3 k_1} \Omega^{20}_{k_4 k_5} \Omega^{13}_{k_6 k_4 k_5 k_2} \Omega^{02}_{k_6 k_3} \left[\frac{1}{\epsilon_{k_1 k_6}\ \epsilon_{k_1 k_2}\ \epsilon_{k_1 k_2 k_4 k_5}\ \epsilon_{k_3 k_6}} + \frac{1}{\epsilon_{k_1 k_2 k_4 k_5}\ \epsilon_{k_1 k_2}\ \epsilon_{k_2 k_4 k_5 k_3}\ \epsilon_{k_3 k_6}} + \frac{1}{\epsilon_{k_1 k_2}} \right. \end{aligned} \tag{715}$$

$\rightarrow$ T12:

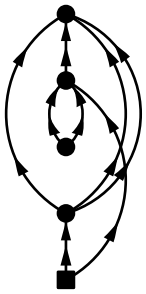


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{716}$$

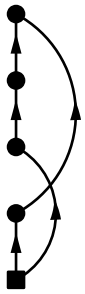
$$\begin{aligned} a_1 &= \epsilon^{k_3}_{k_1} \\ a_2 &= \epsilon^{k_4 k_5} \\ a_3 &= \epsilon^{k_6}_{k_2 k_4 k_5} \\ a_4 &= \epsilon_{k_3 k_6} \end{aligned}$$

Diagram 352:

$$\begin{aligned} \text{PO4.352} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{20}_{k_6 k_7} \Omega^{13}_{k_8 k_6 k_7 k_2} \Omega^{04}_{k_8 k_3 k_4 k_5} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3 k_4 k}_{k_1}} \\ &= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{31}_{k_3 k_4 k_5 k_1} \Omega^{20}_{k_6 k_7} \Omega^{13}_{k_8 k_6 k_7 k_2} \Omega^{04}_{k_8 k_3 k_4 k_5} \left[\frac{1}{\epsilon_{k_1 k_8}\ \epsilon_{k_1 k_2}\ \epsilon_{k_1 k_2 k_6 k_7}\ \epsilon_{k_3 k_4 k_5 k_8}} + \frac{1}{\epsilon_{k_1 k_2 k_6 k_7}\ \epsilon_{k_1 k_2}\ \epsilon_{k_2 k_6 k_7 k_3 k_4 k_5}} \right. \end{aligned} \tag{717}$$



$\rightarrow$ T12:

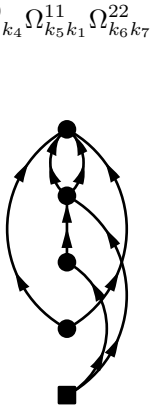


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{718}$$

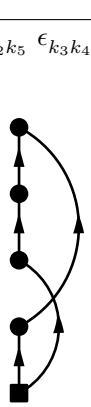
$$\begin{aligned} a_1 &= \epsilon^{k_3 k_4 k_5}_{k_1} \\ a_2 &= \epsilon^{k_6 k_7} \\ a_3 &= \epsilon^{k_8}_{k_2 k_6 k_7} \\ a_4 &= \epsilon_{k_3 k_4 k_5 k_8} \end{aligned}$$

Diagram 353:

$$\begin{aligned} \text{PO4.353} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{22}_{k_6 k_7 k_5 k_2} \Omega^{04}_{k_6 k_7 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3 k_4}} e^{-\tau_2 \epsilon^{k_5}_{k_1}} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{20}_{k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{22}_{k_6 k_7 k_5 k_2} \Omega^{04}_{k_6 k_7 k_3 k_4} \left[\frac{1}{\epsilon_{k_6 k_7}\ \epsilon_{k_1 k_2}\ \epsilon_{k_2 k_5}\ \epsilon_{k_3 k_4 k_6 k_7}} + \frac{1}{\epsilon_{k_2 k_5}\ \epsilon_{k_1 k_2}\ \epsilon_{k_2 k_5 k_3 k_4}\ \epsilon_{k_3 k_4 k_6 k_7}} + \frac{}{\epsilon_{k_1}} \right. \end{aligned} \tag{719}$$



$\rightarrow$ T12:



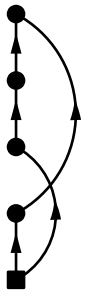
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{720}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3 k_4} \\ a_2 &= \epsilon^{k_5}_{k_1} \\ a_3 &= \epsilon^{k_6 k_7}_{k_2 k_5} \\ a_4 &= \epsilon_{k_3 k_4 k_6 k_7} \end{aligned}$$

Diagram 354:

$$\begin{aligned} \text{PO4.354} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{11}_{k_3 k_1} \Omega^{31}_{k_4 k_5 k_6 k_2} \Omega^{13}_{k_7 k_4 k_5 k_6} \Omega^{02}_{k_7 k_3} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_3}_{k_1}} e^{-\tau_2 \epsilon^{k_4}_{k_2}} \\ &= \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1 k_2} \Omega^{11}_{k_3 k_1} \Omega^{31}_{k_4 k_5 k_6 k_2} \Omega^{13}_{k_7 k_4 k_5 k_6} \Omega^{02}_{k_7 k_3} \left[\frac{1}{\epsilon_{k_1 k_7}\ \epsilon_{k_1 k_2}\ \epsilon_{k_1 k_4 k_5 k_6}\ \epsilon_{k_3 k_7}} + \frac{1}{\epsilon_{k_1 k_4 k_5 k_6}\ \epsilon_{k_1 k_2}\ \epsilon_{k_4 k_5 k_6 k_3}\ \epsilon_{k_3 k_7}} + \right. \end{aligned} \tag{721}$$

$\rightarrow$ T12:

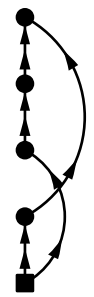


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{722}$$

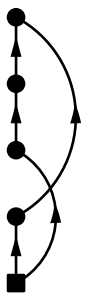
$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3} \\ a_2 &= \epsilon_{k_2}^{k_4 k_5 k_6} \\ a_3 &= \epsilon_{k_4 k_5 k_6}^{k_7} \\ a_4 &= \epsilon_{k_3 k_7} \end{aligned}$$

Diagram 355:

$$\begin{aligned} \text{PO4.355} &= \lim_{\tau\to\infty} -(-1)^4 \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{11}_{k_4k_2}\Omega^{11}_{k_5k_4}\Omega^{02}_{k_5k_3} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon_{k_1}^{k_3}}e^{-\tau_2\epsilon_{k_2}^{k_4}}e^{-\tau_3\epsilon_{k_4}^{k_5}} \\ &= -(-1)^4 \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{11}_{k_4k_2}\Omega^{11}_{k_5k_4}\Omega^{02}_{k_5k_3} \left[\frac{1}{\epsilon_{k_1k_5}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_4}\ \epsilon_{k_3k_5}} + \frac{1}{\epsilon_{k_1k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_4k_3}\ \epsilon_{k_3k_5}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_3}\ \epsilon_{k_3k} \right. \end{aligned} \tag{723}$$



$\rightarrow$ T12:

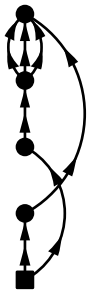


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{724}$$

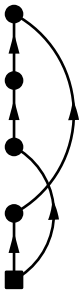
$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3} \\ a_2 &= \epsilon_{k_2}^{k_4} \\ a_3 &= \epsilon_{k_4}^{k_5} \\ a_4 &= \epsilon_{k_3 k_5} \end{aligned}$$

Diagram 356:

$$\begin{aligned} \text{PO4.356} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{11}_{k_4k_2}\Omega^{31}_{k_5k_6k_7k_4}\Omega^{04}_{k_5k_6k_7k_3} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon_{k_1}^{k_3}}e^{-\tau_2\epsilon_{k_2}^{k_4}} \\ &= \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{11}_{k_3k_1}\Omega^{11}_{k_4k_2}\Omega^{31}_{k_5k_6k_7k_4}\Omega^{04}_{k_5k_6k_7k_3} \left[\frac{1}{\epsilon_{k_1k_5k_6k_7}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_4}\ \epsilon_{k_3k_5k_6k_7}} + \frac{1}{\epsilon_{k_1k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_4k_3}\ \epsilon_{k_3k_5k_6k_7}} + \right. \end{aligned} \tag{725}$$



$\rightarrow$ T12:

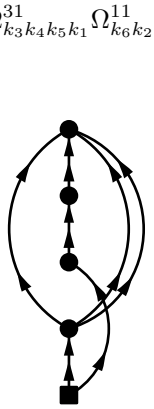


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{726}$$

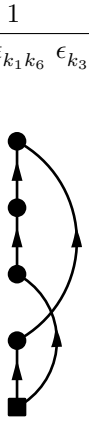
$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3} \\ a_2 &= \epsilon_{k_2}^{k_4} \\ a_3 &= \epsilon_{k_4}^{k_5k_6k_7} \\ a_4 &= \epsilon_{k_3k_5k_6k_7} \end{aligned}$$

Diagram 357:

$$\begin{aligned} \text{PO4.357} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{11}_{k_6k_2}\Omega^{11}_{k_7k_6}\Omega^{04}_{k_7k_3k_4k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon_{k_1}^{k_3k_4k_5}}e^{-} \\ &= \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{11}_{k_6k_2}\Omega^{11}_{k_7k_6}\Omega^{04}_{k_7k_3k_4k_5} \left[\frac{1}{\epsilon_{k_1k_7}\ \epsilon_{k_1k_2}\ \epsilon_{k_1k_6}\ \epsilon_{k_3k_4k_5k_7}} + \frac{1}{\epsilon_{k_1k_6}\ \epsilon_{k_1k_2}\ \epsilon_{k_6k_3k_4k_5}\ \epsilon_{k_3k_4k_5k_7}} + \right. \\ &\qquad \left. \epsilon \right. \end{aligned} \tag{727}$$



$\rightarrow$ T12:

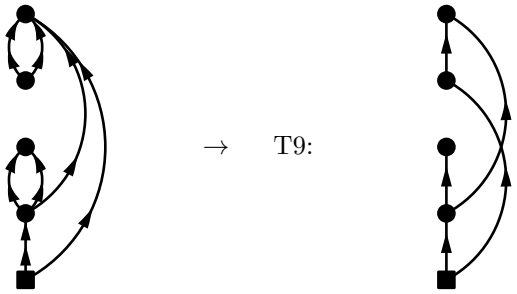


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{728}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3k_4k_5} \\ a_2 &= \epsilon_{k_2}^{k_6} \\ a_3 &= \epsilon_{k_6}^{k_7} \\ a_4 &= \epsilon_{k_3k_4k_5k_7} \end{aligned}$$

Diagram 358:

$$\begin{aligned} \text{PO4.358} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_4}\Omega^{20}_{k_6k_7}\Omega^{04}_{k_6k_7k_5k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon_{k_1}^{k_3k_4k_5}}e^{-\tau_2} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_4}\Omega^{20}_{k_6k_7}\Omega^{04}_{k_6k_7k_5k_2} \left[\frac{1}{\epsilon_{k_1k_2k_6k_7}\ \epsilon_{k_3k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_2k_5k_6k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_2k_5k_6k_7}} \right] \end{aligned} \tag{729}$$



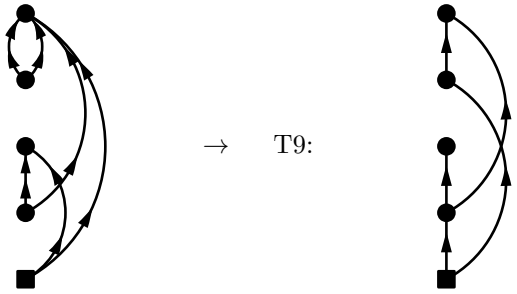
$\rightarrow$ T9:

$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{730}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3k_4k_5} \\ a_2 &= \epsilon_{k_3k_4} \\ a_3 &= \epsilon^{k_6k_7} \\ a_4 &= \epsilon_{k_2k_5k_6k_7} \end{aligned}$$

Diagram 359:

$$\begin{aligned} \text{PO4.359} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{02}_{k_3k_1}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_6k_4k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e^{-\tau_2\epsilon_{k_1k_3}} \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{02}_{k_3k_1}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_6k_4k_2} \left[\frac{1}{\epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_1k_3}\ \epsilon_{k_1k_2}\ \epsilon_{k_2k_4k_5k_6}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_2k_4}\ \epsilon_{k_2k_4k_5k_6}}\right] \end{aligned} \tag{731}$$



$\rightarrow$ T9:

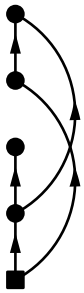
$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{732}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon_{k_1k_3} \\ a_3 &= \epsilon^{k_5k_6} \\ a_4 &= \epsilon_{k_2k_4k_5k_6} \end{aligned}$$

Diagram 360:

$$\begin{aligned} \text{PO4.360} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_5k_1}\Omega^{20}_{k_7k_8}\Omega^{04}_{k_7k_8k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k}} \\ &= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_5k_1}\Omega^{20}_{k_7k_8}\Omega^{04}_{k_7k_8k_6k_2} \left[\frac{1}{\epsilon_{k_1k_2k_7k_8}\ \epsilon_{k_1k_3k_4k_5}\ \epsilon_{k_1k_2}\ \epsilon_{k_2k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_5}\ \epsilon_{k_2k_6}\ \epsilon_{k_2}}\right. \end{aligned} \tag{733}$$

$\rightarrow$ T9:

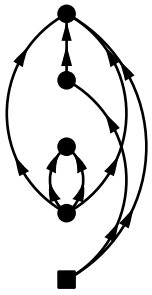


$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{734}$$

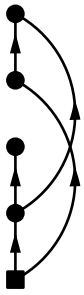
$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon_{k_1k_3k_4k_5} \\ a_3 &= \epsilon^{k_7k_8} \\ a_4 &= \epsilon_{k_2k_6k_7k_8} \end{aligned}$$

Diagram 361:

$$\begin{aligned} \text{PO4.361} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{11}_{k_7k_1}\Omega^{04}_{k_7k_5k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5k_6}}e^{-} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{11}_{k_7k_1}\Omega^{04}_{k_7k_5k_6k_2} \left[\frac{1}{\epsilon_{k_2k_7}\ \epsilon_{k_3k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_2k_5k_6k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_2k_5k_6k_7}}\right] \end{aligned} \tag{735}$$



$\rightarrow$ T9:

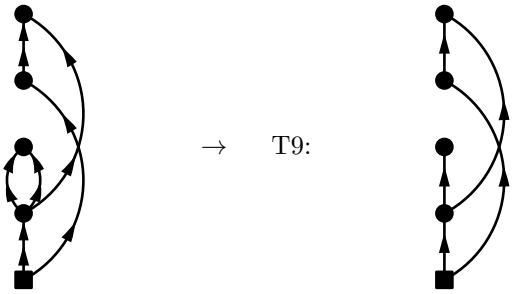


$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{736}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon_{k_3k_4} \\ a_3 &= \epsilon^{k_7}_{k_1} \\ a_4 &= \epsilon_{k_2k_5k_6k_7} \end{aligned}$$

Diagram 362:

$$\begin{aligned} \text{PO4.362} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_4}\Omega^{11}_{k_6k_2}\Omega^{02}_{k_6k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5}_{k_1}}e^{-\tau_2\epsilon_{k_3} \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_4}\Omega^{11}_{k_6k_2}\Omega^{02}_{k_6k_5} \left[\frac{1}{\epsilon_{k_1k_6}\ \epsilon_{k_3k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_6}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_5k_6}}\right] \end{aligned} \tag{737}$$



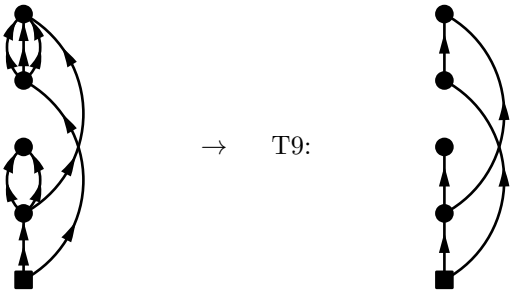
$\rightarrow$ T9:

$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{738}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3k_4k_5} \\ a_2 &= \epsilon_{k_3k_4} \\ a_3 &= \epsilon_{k_2}^{k_6} \\ a_4 &= \epsilon_{k_5k_6} \end{aligned}$$

Diagram 363:

$$\begin{aligned} \text{PO4.363} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_4}\Omega^{31}_{k_6k_7k_8k_2}\Omega^{04}_{k_6k_7k_8k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon_{k_1}^{k_3k_4k}} \\ &= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_4}\Omega^{31}_{k_6k_7k_8k_2}\Omega^{04}_{k_6k_7k_8k_5} \left[\frac{1}{\epsilon_{k_1k_6k_7k_8}\ \epsilon_{k_3k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_5k_6k_7k_8}} \right. \end{aligned} \tag{739}$$



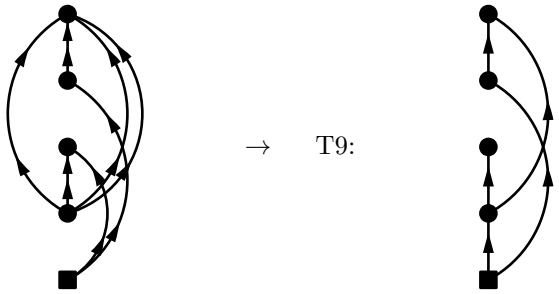
$\rightarrow$ T9:

$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{740}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_3k_4k_5} \\ a_2 &= \epsilon_{k_3k_4} \\ a_3 &= \epsilon_{k_2}^{k_6k_7k_8} \\ a_4 &= \epsilon_{k_5k_6k_7k_8} \end{aligned}$$

Diagram 364:

$$\begin{aligned} \text{PO4.364} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{11}_{k_7k_2}\Omega^{04}_{k_7k_4k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5k_6}}e^{-} \\ &= \frac{(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{11}_{k_7k_2}\Omega^{04}_{k_7k_4k_5k_6} \left[\frac{1}{\epsilon_{k_1k_7}\ \epsilon_{k_1k_3}\ \epsilon_{k_1k_2}\ \epsilon_{k_4k_5k_6k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_2k_4k_5k_6}\ \epsilon_{k_4k_5k_6k_7}} \right] \end{aligned} \tag{741}$$

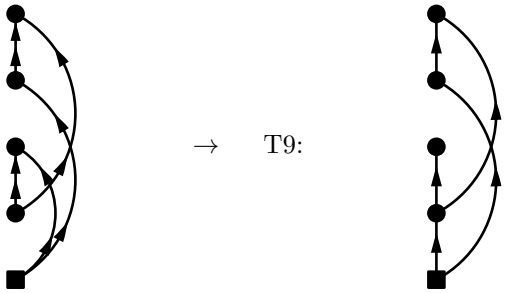


$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{742}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon_{k_1k_3} \\ a_3 &= \epsilon^{k_7}_{k_2} \\ a_4 &= \epsilon_{k_4k_5k_6k_7} \end{aligned}$$

Diagram 365:

$$\begin{aligned} \text{PO4.365} &= \lim_{\tau\to\infty}(-1)^4 \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{02}_{k_3k_1}\Omega^{11}_{k_5k_2}\Omega^{02}_{k_5k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e^{-\tau_2\epsilon_{k_1k_3}}e^{-\tau_3\epsilon^{k}_{k} \\ &= (-1)^4 \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{02}_{k_3k_1}\Omega^{11}_{k_5k_2}\Omega^{02}_{k_5k_4}\left[\frac{1}{\epsilon_{k_1k_5}\ \epsilon_{k_1k_3}\ \epsilon_{k_1k_2}\ \epsilon_{k_4k_5}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_2k_4}\ \epsilon_{k_4k_5}}\right] \end{aligned} \tag{743}$$

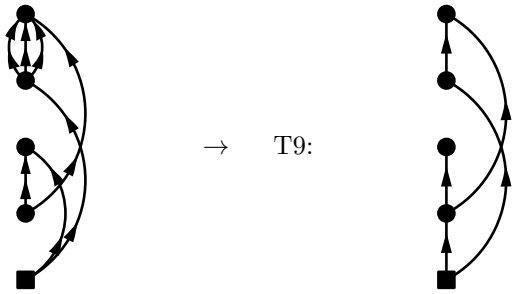


$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{744}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon_{k_1k_3} \\ a_3 &= \epsilon^{k_5}_{k_2} \\ a_4 &= \epsilon_{k_4k_5} \end{aligned}$$

Diagram 366:

$$\begin{aligned} \text{PO4.366} &= \lim_{\tau\to\infty}\frac{(-1)^4}{(3!)}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{02}_{k_3k_1}\Omega^{31}_{k_5k_6k_7k_2}\Omega^{04}_{k_5k_6k_7k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e^{-\tau_2\epsilon_{k_1} \\ &= \frac{(-1)^4}{(3!)}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{02}_{k_3k_1}\Omega^{31}_{k_5k_6k_7k_2}\Omega^{04}_{k_5k_6k_7k_4}\left[\frac{1}{\epsilon_{k_1k_5k_6k_7}\ \epsilon_{k_1k_3}\ \epsilon_{k_1k_2}\ \epsilon_{k_4k_5k_6k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_2k_4}\ \epsilon_{k_4k_5k_6k_7}}\right] \end{aligned} \tag{745}$$



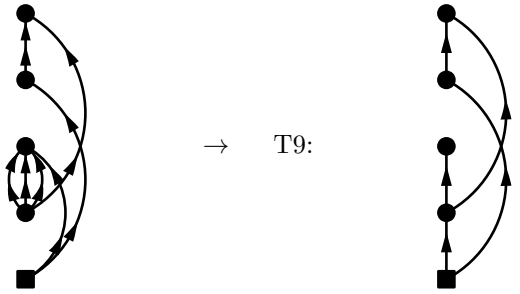
$\rightarrow$ T9:

$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{746}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4} \\ a_2 &= \epsilon_{k_1k_3} \\ a_3 &= \epsilon_{k_2}^{k_5k_6k_7} \\ a_4 &= \epsilon_{k_4k_5k_6k_7} \end{aligned}$$

Diagram 367:

$$\begin{aligned} \text{PO4.367} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_5k_1}\Omega^{11}_{k_7k_2}\Omega^{02}_{k_7k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5k_6}}e^{-} \\ &= \frac{(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_5k_1}\Omega^{11}_{k_7k_2}\Omega^{02}_{k_7k_6}\left[\frac{1}{\epsilon_{k_1k_7}\ \epsilon_{k_1k_3k_4k_5}\ \epsilon_{k_1k_2}\ \epsilon_{k_6k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_5}\ \epsilon_{k_2k_6}\ \epsilon_{k_6k_7}}\right] \end{aligned} \tag{747}$$



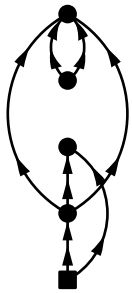
$\rightarrow$ T9:

$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{748}$$

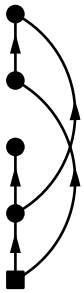
$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon_{k_1k_3k_4k_5} \\ a_3 &= \epsilon_{k_2}^{k_7} \\ a_4 &= \epsilon_{k_6k_7} \end{aligned}$$

Diagram 368:

$$\begin{aligned} \text{PO4.368} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_2}\Omega^{20}_{k_6k_7}\Omega^{04}_{k_6k_7k_4k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon_{k_1}^{k_3k_4k_5}}e^{-\tau_2} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_2}\Omega^{20}_{k_6k_7}\Omega^{04}_{k_6k_7k_4k_5}\left[\frac{1}{\epsilon_{k_1k_2k_6k_7}\ \epsilon_{k_2k_3}\ \epsilon_{k_1k_2}\ \epsilon_{k_4k_5k_6k_7}} + \frac{1}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_5}\ \epsilon_{k_4k_5k_6k_7}}\right] \end{aligned} \tag{749}$$



$\rightarrow$ T9:



$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{750}$$

$$a_1 = \epsilon_{k_1}^{k_3k_4k_5}$$
$$a_2 = \epsilon_{k_2k_3}$$
$$a_3 = \epsilon^{k_6k_7}$$
$$a_4 = \epsilon_{k_4k_5k_6k_7}$$

Diagram 369:

$$\text{PO4.369} = \lim_{\tau\to\infty}(-1)^4\sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_2}\Omega^{11}_{k_6k_4}\Omega^{02}_{k_6k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5}_{k_1}}$$
$$= (-1)^4\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_2}\Omega^{11}_{k_6k_4}\Omega^{02}_{k_6k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_5}\ \epsilon_{k_5k_6}} \tag{751}$$

$\rightarrow$ T5:

$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{752}$$

$$a_1 = \epsilon_{k_1}^{k_3k_4k_5}$$
$$a_2 = \epsilon_{k_2k_3}$$
$$a_3 = \epsilon_{k_4}^{k_6}$$
$$a_4 = \epsilon_{k_5k_6}$$

Diagram 370:

$$\text{PO4.370} = \lim_{\tau\to\infty}\frac{(-1)^4}{(3!)}\sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_2}\Omega^{31}_{k_6k_7k_8k_4}\Omega^{04}_{k_6k_7k_8k_5}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-}$$
$$= \frac{(-1)^4}{(3!)}\sum_{k_i}\frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_2}\Omega^{31}_{k_6k_7k_8k_4}\Omega^{04}_{k_6k_7k_8k_5}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_5}\ \epsilon_{k_5k_6k_7k_8}} \tag{753}$$

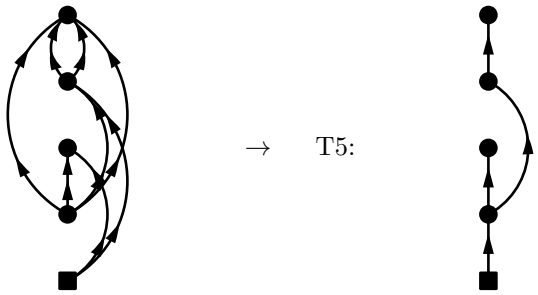
$\rightarrow$ T5:

$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{754}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3}$$
$$a_3 = \epsilon^{k_6k_7k_8}_{k_4}$$
$$a_4 = \epsilon_{k_5k_6k_7k_8}$$

Diagram 371:

$$\mathrm{PO4.371} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{22}_{k_7k_8k_4k_2}\Omega^{04}_{k_7k_8k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)$$
$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{22}_{k_7k_8k_4k_2}\Omega^{04}_{k_7k_8k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_2k_4k_5k_6}\ \epsilon_{k_5k_6k_7k_8}} \tag{755}$$

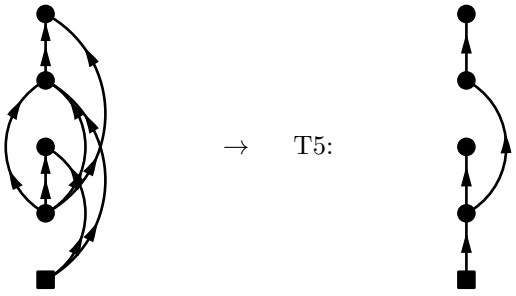


$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{756}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_1k_3}$$
$$a_3 = \epsilon^{k_7k_8}_{k_2k_4}$$
$$a_4 = \epsilon_{k_5k_6k_7k_8}$$

Diagram 372:

$$\mathrm{PO4.372} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{13}_{k_7k_4k_5k_2}\Omega^{02}_{k_7k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$
$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{13}_{k_7k_4k_5k_2}\Omega^{02}_{k_7k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_2k_4k_5k_6}\ \epsilon_{k_6k_7}} \tag{757}$$



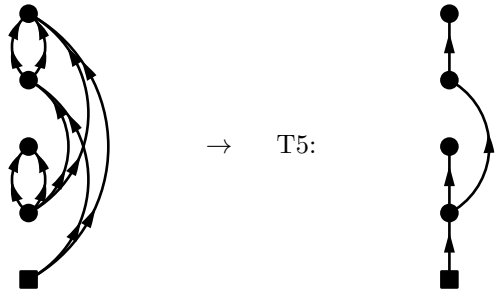
$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{758}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_1k_3}$$
$$a_3 = \epsilon^{k_7}_{k_2k_4k_5}$$
$$a_4 = \epsilon_{k_6k_7}$$

Diagram 373:

$$\text{PO4.373} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{22}_{k_7k_8k_5k_1}\Omega^{04}_{k_7k_8k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{22}_{k_7k_8k_5k_1}\Omega^{04}_{k_7k_8k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_1k_5k_2k_6}\ \epsilon_{k_2k_6k_7k_8}} \tag{759}$$



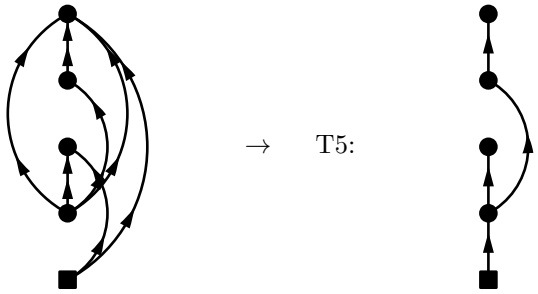
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{760}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_3k_4}$$
$$a_3 = \epsilon^{k_7k_8}_{k_1k_5}$$
$$a_4 = \epsilon_{k_2k_6k_7k_8}$$

Diagram 374:

$$\text{PO4.374} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{11}_{k_7k_4}\Omega^{04}_{k_7k_5k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau}$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{11}_{k_7k_4}\Omega^{04}_{k_7k_5k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_4k_2k_5k_6}\ \epsilon_{k_2k_5k_6k_7}} \tag{761}$$



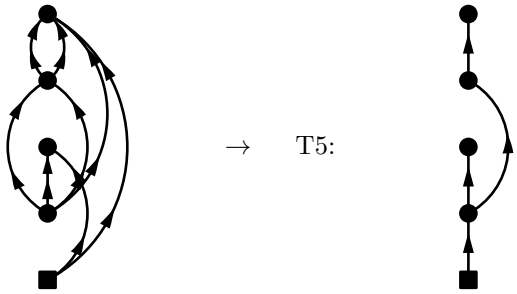
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{762}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_1k_3}$$
$$a_3 = \epsilon^{k_7}_{k_4}$$
$$a_4 = \epsilon_{k_2k_5k_6k_7}$$

Diagram 375:

$$\text{PO4.375} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{22}_{k_7k_8k_4k_5}\Omega^{04}_{k_7k_8k_6k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{22}_{k_7k_8k_4k_5}\Omega^{04}_{k_7k_8k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_4k_5k_2k_6}\ \epsilon_{k_2k_6k_7k_8}} \tag{763}$$

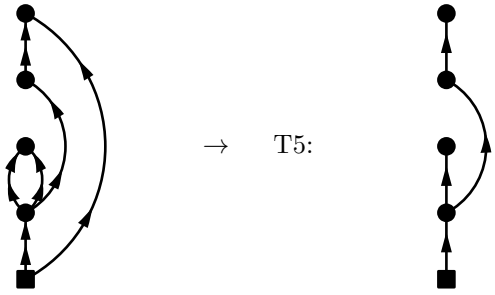


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{764}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon_{k_1k_3} \\ a_3 &= \epsilon^{k_7k_8}_{k_4k_5} \\ a_4 &= \epsilon_{k_2k_6k_7k_8} \end{aligned}$$

Diagram 376:

$$\begin{aligned} \text{PO4.376} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_4}\Omega^{11}_{k_6k_5}\Omega^{02}_{k_6k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5}_{k_1}}e^{-\tau_2\epsilon_{k_3k_4}} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_4}\Omega^{11}_{k_6k_5}\Omega^{02}_{k_6k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_2}\ \epsilon_{k_2k_6}} \end{aligned} \tag{765}$$

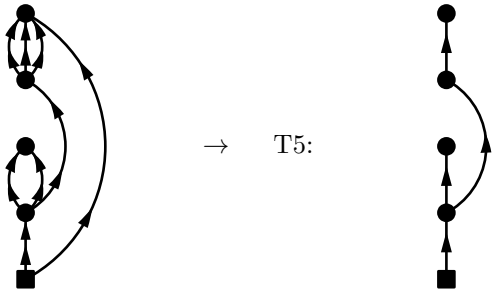


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{766}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\ a_2 &= \epsilon_{k_3k_4} \\ a_3 &= \epsilon^{k_6}_{k_5} \\ a_4 &= \epsilon_{k_2k_6} \end{aligned}$$

Diagram 377:

$$\begin{aligned} \text{PO4.377} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_4}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{04}_{k_6k_7k_8k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5}_{k_1}} \\ &= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_4}\Omega^{31}_{k_6k_7k_8k_5}\Omega^{04}_{k_6k_7k_8k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_2}\ \epsilon_{k_2k_6k_7k_8}} \end{aligned} \tag{767}$$

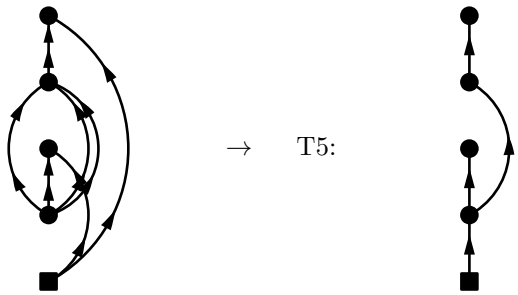


$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{768}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon_{k_3k_4}$$
$$a_3 = \epsilon^{k_6k_7k_8}_{k_5}$$
$$a_4 = \epsilon_{k_2k_6k_7k_8}$$

Diagram 378:

$$\mathrm{PO4.378} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{13}_{k_7k_4k_5k_6}\Omega^{02}_{k_7k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5k_6}}e$$
$$= \frac{-(-1)^4}{(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_1}\Omega^{13}_{k_7k_4k_5k_6}\Omega^{02}_{k_7k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_4k_5k_6k_2}\ \epsilon_{k_2k_7}} \tag{769}$$

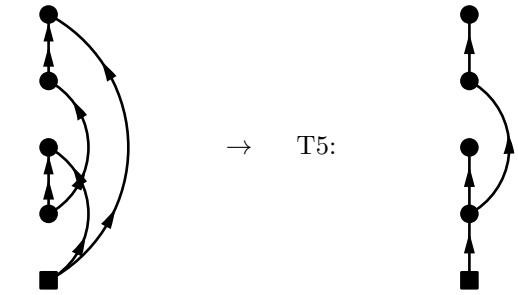


$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{770}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_1k_3}$$
$$a_3 = \epsilon^{k_7}_{k_4k_5k_6}$$
$$a_4 = \epsilon_{k_2k_7}$$

Diagram 379:

$$\mathrm{PO4.379} = \lim_{\tau\to\infty} -(-1)^4 \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{02}_{k_3k_1}\Omega^{11}_{k_5k_4}\Omega^{02}_{k_5k_2}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e^{-\tau_2\epsilon_{k_1k_3}}e^{-\tau}$$
$$= -(-1)^4 \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{02}_{k_3k_1}\Omega^{11}_{k_5k_4}\Omega^{02}_{k_5k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_4k_2}\ \epsilon_{k_2k_5}} \tag{771}$$



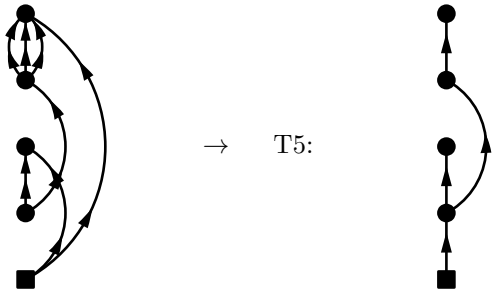
$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{772}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon_{k_1k_3}$$
$$a_3 = \epsilon^{k_5}_{k_4}$$
$$a_4 = \epsilon_{k_2k_5}$$

Diagram 380:

$$\text{PO4.380} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{02}_{k_3k_1}\Omega^{31}_{k_5k_6k_7k_4}\Omega^{04}_{k_5k_6k_7k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e^{-\tau_2}$$

$$= \frac{-(-1)^4}{(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{02}_{k_3k_1}\Omega^{31}_{k_5k_6k_7k_4}\Omega^{04}_{k_5k_6k_7k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_4k_2}\ \epsilon_{k_2k_5k_6k_7}} \tag{773}$$



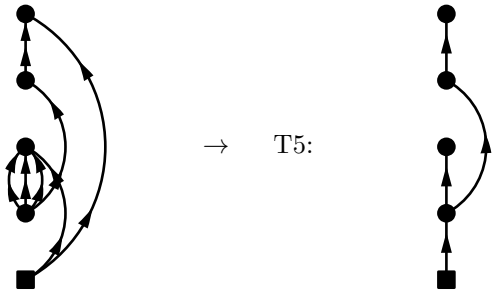
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{774}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon_{k_1k_3}$$
$$a_3 = \epsilon^{k_5k_6k_7}_{k_4}$$
$$a_4 = \epsilon_{k_2k_5k_6k_7}$$

Diagram 381:

$$\text{PO4.381} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_5k_1}\Omega^{11}_{k_7k_6}\Omega^{02}_{k_7k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5k_6}}e$$

$$= \frac{-(-1)^4}{(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_5k_1}\Omega^{11}_{k_7k_6}\Omega^{02}_{k_7k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_5}\ \epsilon_{k_6k_2}\ \epsilon_{k_2k_7}} \tag{775}$$



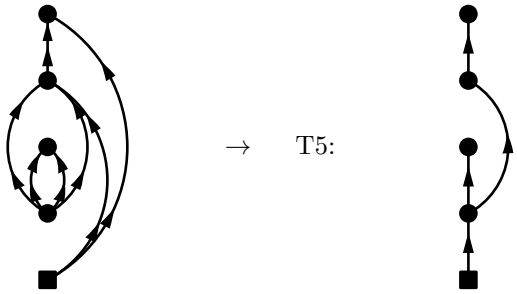
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{776}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_1k_3k_4k_5}$$
$$a_3 = \epsilon^{k_7}_{k_6}$$
$$a_4 = \epsilon_{k_2k_7}$$

Diagram 382:

$$\text{PO4.382} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{13}_{k_7k_5k_6k_1}\Omega^{02}_{k_7k_2} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5k_6}}e^{-}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{02}_{k_3k_4}\Omega^{13}_{k_7k_5k_6k_1}\Omega^{02}_{k_7k_2}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_1k_5k_6k_2}\ \epsilon_{k_2k_7}} \tag{777}$$

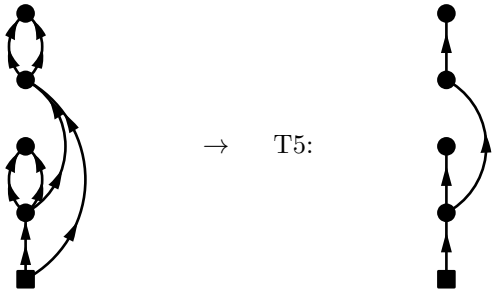


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{778}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5k_6} \\ a_2 &= \epsilon_{k_3k_4} \\ a_3 &= \epsilon^{k_7}_{k_1k_5k_6} \\ a_4 &= \epsilon_{k_2k_7} \end{aligned}$$

Diagram 383:

$$\begin{aligned} \text{PO4.383} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_4}\Omega^{22}_{k_6k_7k_5k_2}\Omega^{02}_{k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5}_{k_1}}e^{-\tau_2} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_4}\Omega^{22}_{k_6k_7k_5k_2}\Omega^{02}_{k_6k_7}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_6k_7}} \end{aligned} \tag{779}$$

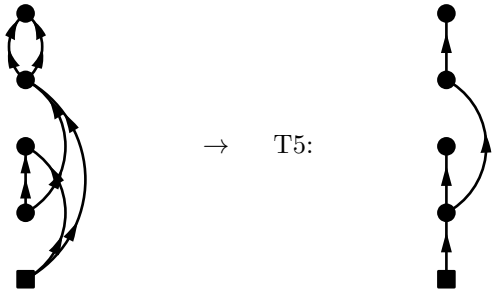


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{780}$$

$$\begin{aligned} a_1 &= \epsilon^{k_3k_4k_5}_{k_1} \\ a_2 &= \epsilon_{k_3k_4} \\ a_3 &= \epsilon^{k_6k_7}_{k_2k_5} \\ a_4 &= \epsilon_{k_6k_7} \end{aligned}$$

Diagram 384:

$$\begin{aligned} \text{PO4.384} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{02}_{k_3k_1}\Omega^{22}_{k_5k_6k_4k_2}\Omega^{02}_{k_5k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4}}e^{-\tau_2\epsilon_{k_1k_3}} \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{20}_{k_3k_4}\Omega^{02}_{k_3k_1}\Omega^{22}_{k_5k_6k_4k_2}\Omega^{02}_{k_5k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3}\ \epsilon_{k_2k_4}\ \epsilon_{k_5k_6}} \end{aligned} \tag{781}$$



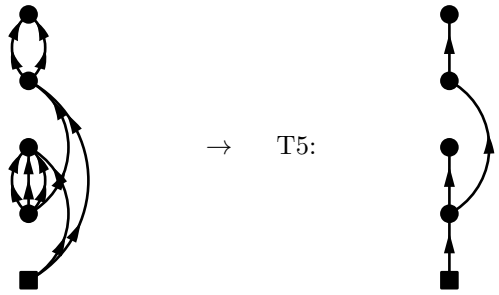
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{782}$$

$$a_1 = \epsilon^{k_3k_4}$$
$$a_2 = \epsilon_{k_1k_3}$$
$$a_3 = \epsilon^{k_5k_6}_{k_2k_4}$$
$$a_4 = \epsilon_{k_5k_6}$$

Diagram 385:

$$\text{PO4.385} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_5k_1}\Omega^{22}_{k_7k_8k_6k_2}\Omega^{02}_{k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k}}$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{40}_{k_3k_4k_5k_6}\Omega^{04}_{k_3k_4k_5k_1}\Omega^{22}_{k_7k_8k_6k_2}\Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_3k_4k_5}\ \epsilon_{k_2k_6}\ \epsilon_{k_7k_8}} \tag{783}$$



$\rightarrow$ T5:

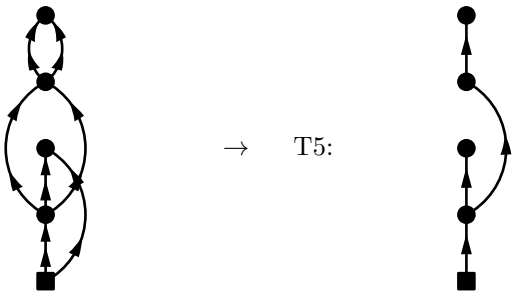
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{784}$$

$$a_1 = \epsilon^{k_3k_4k_5k_6}$$
$$a_2 = \epsilon_{k_1k_3k_4k_5}$$
$$a_3 = \epsilon^{k_7k_8}_{k_2k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 386:

$$\text{PO4.386} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_2}\Omega^{22}_{k_6k_7k_4k_5}\Omega^{02}_{k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_3k_4k_5}_{k_1}}e^{-\tau_2}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{20}_{k_1k_2}\Omega^{31}_{k_3k_4k_5k_1}\Omega^{02}_{k_3k_2}\Omega^{22}_{k_6k_7k_4k_5}\Omega^{02}_{k_6k_7}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_5}\ \epsilon_{k_6k_7}} \tag{785}$$



$\rightarrow$ T5:

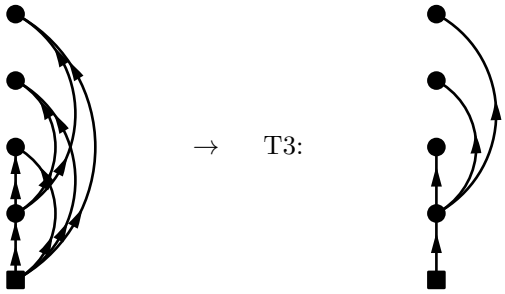
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{786}$$

$$a_1 = \epsilon^{k_3k_4k_5}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3}$$
$$a_3 = \epsilon^{k_6k_7}_{k_4k_5}$$
$$a_4 = \epsilon_{k_6k_7}$$

Diagram 387:

$$\text{PO4.387} = \lim_{\tau\to\infty} \frac{-(-1)^4}{6} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_2} \Omega^{02}_{k_6k_3} \Omega^{02}_{k_7k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1) e^{-\tau_1 \epsilon^{k_5k_6k_7}_{k_1}} e^{-}$$

$$= \frac{-(-1)^4}{6} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_2} \Omega^{02}_{k_6k_3} \Omega^{02}_{k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_3k_6}\ \epsilon_{k_4k_7}} \tag{787}$$



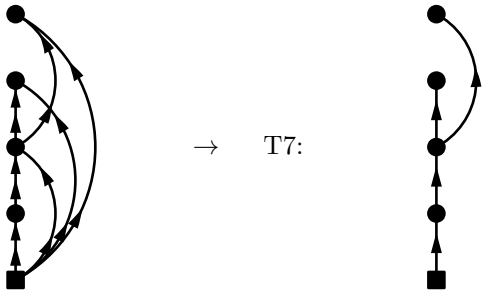
$$\text{T3} = \frac{1}{(a_1+a_2+a_3+a_4)a_2a_3a_4} \tag{788}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_5}$$
$$a_3 = \epsilon_{k_3k_6}$$
$$a_4 = \epsilon_{k_4k_7}$$

Diagram 388:

$$\text{PO4.388} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{22}_{k_6k_7k_5k_2} \Omega^{02}_{k_6k_3} \Omega^{02}_{k_7k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) e^{-\tau_1 \epsilon^{k_5}_{k_1}} e^{-\tau_2 \epsilon^{k_6}_{k_2}}$$

$$= \frac{-(-1)^4}{2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{22}_{k_6k_7k_5k_2} \Omega^{02}_{k_6k_3} \Omega^{02}_{k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_3k_4}\ \epsilon_{k_3k_6}\ \epsilon_{k_4k_7}} \tag{789}$$



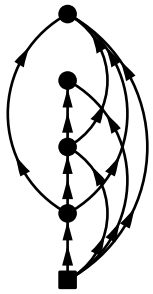
$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{790}$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7}_{k_2k_5}$$
$$a_3 = \epsilon_{k_3k_6}$$
$$a_4 = \epsilon_{k_4k_7}$$

Diagram 389:

$$\text{PO4.389} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_2} \Omega^{02}_{k_8k_3} \Omega^{04}_{k_9k_6k_7k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_2} \Omega^{02}_{k_8k_3} \Omega^{04}_{k_9k_6k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_3k_4k_6k_7}\ \epsilon_{k_3k_8}\ \epsilon_{k_4k_6k_7k_9}} \tag{791}$$



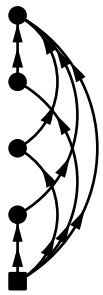
$\rightarrow$ T7:

$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{792}$$

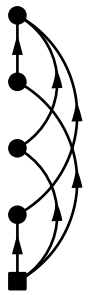
$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_5k_6k_7} \\ a_2 &= \epsilon_{k_2k_5}^{k_8k_9} \\ a_3 &= \epsilon_{k_3k_8} \\ a_4 &= \epsilon_{k_4k_6k_7k_9} \end{aligned}$$

Diagram 390:

$$\begin{aligned} \mathrm{PO4.390} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{6} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{11}_{k_6k_2}\Omega^{11}_{k_7k_3}\Omega^{04}_{k_7k_6k_5k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1}}e^{-\tau_2\epsilon^{k_6}_{k_2}} \\ &= \frac{-(-1)^4}{6} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{11}_{k_6k_2}\Omega^{11}_{k_7k_3}\Omega^{04}_{k_7k_6k_5k_4} \left[\frac{1}{\epsilon_{k_1k_2k_4k_7}\ \epsilon_{k_2k_4k_5k_7}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_5k_6k_7}} + \frac{1}{\epsilon_{k_1k_4k_6k_7}\ \epsilon_{k_1k_2k_4k_7}\ \epsilon_{k_1k_2}} \right. \end{aligned} \tag{793}$$



$\rightarrow$ T8:

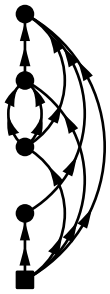


$$\mathrm{T8} = \frac{1}{(a_1+a_2+a_4)(a_2+a_4)(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_4)(a_2+a_1+a_4)(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_4)(a_2+a_1+a_3+} \tag{794}$$

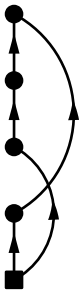
$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_5} \\ a_2 &= \epsilon_{k_2}^{k_6} \\ a_3 &= \epsilon_{k_3}^{k_7} \\ a_4 &= \epsilon_{k_4k_5k_6k_7} \end{aligned}$$

Diagram 391:

$$\begin{aligned} \mathrm{PO4.391} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{31}_{k_6k_7k_8k_2}\Omega^{13}_{k_9k_6k_7k_3}\Omega^{04}_{k_9k_8k_5k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{31}_{k_6k_7k_8k_2}\Omega^{13}_{k_9k_6k_7k_3}\Omega^{04}_{k_9k_8k_5k_4} \left[\frac{1}{\epsilon_{k_1k_4k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_3k_6k_7k_4k_8}\ \epsilon_{k_4k_5k_8k_9}} + \frac{}{\epsilon_{k_1k_3k_6k_7k_4k} \right. \end{aligned} \tag{795}$$



$\rightarrow$ T12:

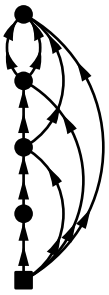


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{796}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6 k_7 k_8}_{k_2} \\ a_3 &= \epsilon^{k_9}_{k_3 k_6 k_7} \\ a_4 &= \epsilon_{k_4 k_5 k_8 k_9} \end{aligned}$$

Diagram 392:

$$\begin{aligned} \text{PO4.392} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{22}_{k_6k_7k_5k_2} \Omega^{22}_{k_8k_9k_6k_3} \Omega^{04}_{k_8k_9k_7k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{22}_{k_6k_7k_5k_2} \Omega^{22}_{k_8k_9k_6k_3} \Omega^{04}_{k_8k_9k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_3k_4}\ \epsilon_{k_3k_6k_4k_7}\ \epsilon_{k_4k_7k_8k_9}} \end{aligned} \tag{797}$$



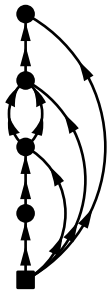
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{798}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6 k_7}_{k_2 k_5} \\ a_3 &= \epsilon^{k_8 k_9}_{k_3 k_6} \\ a_4 &= \epsilon_{k_4 k_7 k_8 k_9} \end{aligned}$$

Diagram 393:

$$\begin{aligned} \text{PO4.393} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{22}_{k_6k_7k_5k_2} \Omega^{13}_{k_8k_6k_7k_3} \Omega^{02}_{k_8k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1}} e^{-\tau_2} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{22}_{k_6k_7k_5k_2} \Omega^{13}_{k_8k_6k_7k_3} \Omega^{02}_{k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_3k_4}\ \epsilon_{k_3k_6k_7k_4}\ \epsilon_{k_4k_8}} \end{aligned} \tag{799}$$



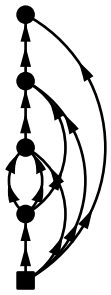
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{800}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6 k_7}_{k_2 k_5} \\ a_3 &= \epsilon^{k_8}_{k_3 k_6 k_7} \\ a_4 &= \epsilon_{k_4 k_8} \end{aligned}$$

Diagram 394:

$$\begin{aligned} \text{PO4.394} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_6k_2} \Omega^{13}_{k_9k_8k_7k_3} \Omega^{02}_{k_9k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_6k_2} \Omega^{13}_{k_9k_8k_7k_3} \Omega^{02}_{k_9k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_6k_3k_7k_4}\ \epsilon_{k_3k_7k_8k_4}\ \epsilon_{k_4k_9}} \end{aligned} \tag{801}$$



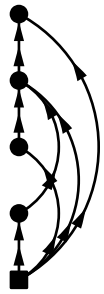
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{802}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_2k_5k_6} \\ a_3 &= \epsilon^{k_9}_{k_3k_7k_8} \\ a_4 &= \epsilon_{k_4k_9} \end{aligned}$$

Diagram 395:

$$\begin{aligned} \text{PO4.395} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{11}_{k_6k_2} \Omega^{13}_{k_7k_6k_5k_3} \Omega^{02}_{k_7k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5}_{k_1}} e^{-\tau_2\epsilon^{k_6}_{k_2}} \\ &= \frac{-(-1)^4}{2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{11}_{k_6k_2} \Omega^{13}_{k_7k_6k_5k_3} \Omega^{02}_{k_7k_4} \left[\frac{1}{\epsilon_{k_1k_3k_6k_4}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_6k_4}\ \epsilon_{k_4k_7}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_4}\ \epsilon_{k_3k_5k_6k_} \right. \end{aligned} \tag{803}$$



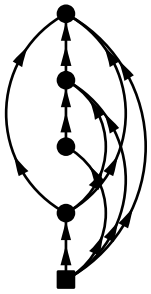
$\rightarrow$ T13:

$$\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{804}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6}_{k_2} \\ a_3 &= \epsilon^{k_7}_{k_3 k_5 k_6} \\ a_4 &= \epsilon_{k_4 k_7} \end{aligned}$$

Diagram 396:

$$\begin{aligned} \text{PO4.396} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{11}_{k_8k_2} \Omega^{13}_{k_9k_8k_5k_3} \Omega^{04}_{k_9k_6k_7k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{11}_{k_8k_2} \Omega^{13}_{k_9k_8k_5k_3} \Omega^{04}_{k_9k_6k_7k_4} \left[\frac{1}{\epsilon_{k_1k_3k_8k_4}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_8k_4k_6k_7}\ \epsilon_{k_4k_6k_7k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k} \right. \end{aligned} \tag{805}$$



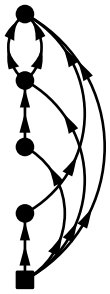
$\rightarrow$ T13:

$$\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{806}$$

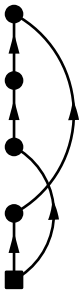
$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_2} \\ a_3 &= \epsilon^{k_9}_{k_3 k_5 k_8} \\ a_4 &= \epsilon_{k_4 k_6 k_7 k_9} \end{aligned}$$

Diagram 397:

$$\begin{aligned} \text{PO4.397} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{11}_{k_6k_2} \Omega^{22}_{k_7k_8k_6k_3} \Omega^{04}_{k_7k_8k_5k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5}_{k_1}} e^{-\tau_2} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{11}_{k_6k_2} \Omega^{22}_{k_7k_8k_6k_3} \Omega^{04}_{k_7k_8k_5k_4} \left[\frac{1}{\epsilon_{k_1k_4k_7k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_3k_6k_4}\ \epsilon_{k_4k_5k_7k_8}} + \frac{1}{\epsilon_{k_1k_3k_6k_4}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k} \right. \end{aligned} \tag{807}$$



$\rightarrow$ T12:

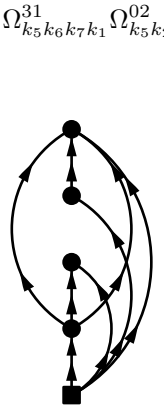


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{808}$$

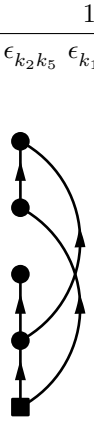
$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6}_{k_2} \\ a_3 &= \epsilon^{k_7 k_8}_{k_3 k_6} \\ a_4 &= \epsilon_{k_4 k_5 k_7 k_8} \end{aligned}$$

Diagram 398:

$$\begin{aligned} \text{PO4.398} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_2} \Omega^{11}_{k_8k_3} \Omega^{04}_{k_8k_6k_7k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5k_6k_7}_{k_1}} \epsilon \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_2} \Omega^{11}_{k_8k_3} \Omega^{04}_{k_8k_6k_7k_4} \left[\frac{1}{\epsilon_{k_1k_2k_4k_8}\ \epsilon_{k_2k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_3k_4k_6k_7}\ } \right. \end{aligned} \tag{809}$$



$\rightarrow$ T9:

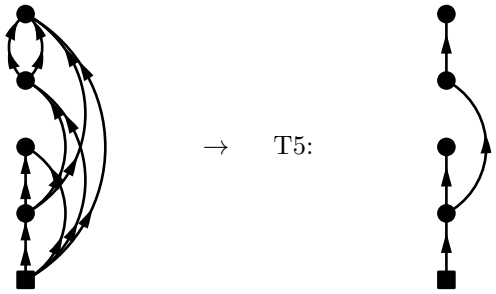


$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{810}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon_{k_2k_5} \\ a_3 &= \epsilon^{k_8}_{k_3} \\ a_4 &= \epsilon_{k_4k_6k_7k_8} \end{aligned}$$

Diagram 399:

$$\begin{aligned} \text{PO4.399} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_2} \Omega^{22}_{k_8k_9k_6k_3} \Omega^{04}_{k_8k_9k_7k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_2} \Omega^{22}_{k_8k_9k_6k_3} \Omega^{04}_{k_8k_9k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_3k_6k_4k_7}\ \epsilon_{k_4k_7k_8k_9}} \end{aligned} \tag{811}$$



$\rightarrow$ T5:

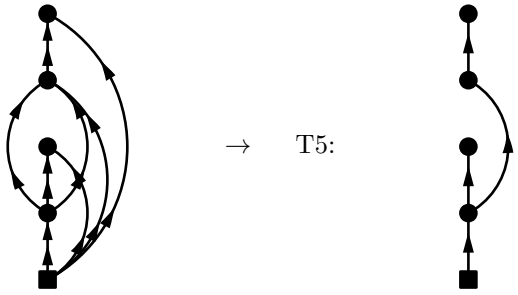
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{812}$$

$$a_1 = \epsilon_{k_1}^{k_5k_6k_7}$$
$$a_2 = \epsilon_{k_2k_5}$$
$$a_3 = \epsilon_{k_3k_6}^{k_8k_9}$$
$$a_4 = \epsilon_{k_4k_7k_8k_9}$$

Diagram 400:

$$\text{PO4.400} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_2} \Omega^{13}_{k_8k_6k_7k_3} \Omega^{02}_{k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon_{k_1}^{k_5k_6k_7}} \epsilon$$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_2} \Omega^{13}_{k_8k_6k_7k_3} \Omega^{02}_{k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_3k_6k_7k_4}\ \epsilon_{k_4k_8}} \tag{813}$$



$\rightarrow$ T5:

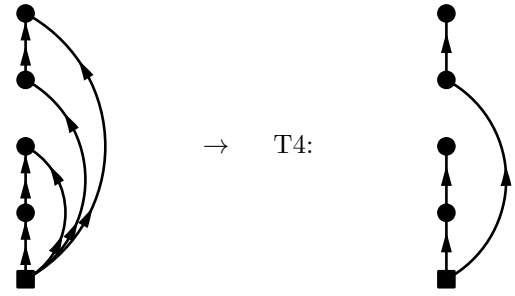
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{814}$$

$$a_1 = \epsilon_{k_1}^{k_5k_6k_7}$$
$$a_2 = \epsilon_{k_2k_5}$$
$$a_3 = \epsilon_{k_3k_6k_7}^{k_8}$$
$$a_4 = \epsilon_{k_4k_8}$$

Diagram 401:

$$\text{PO4.401} = \lim_{\tau\to\infty} \frac{(-1)^4}{2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{02}_{k_5k_2} \Omega^{11}_{k_6k_3} \Omega^{02}_{k_6k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon_{k_1}^{k_5}} e^{-\tau_2\epsilon_{k_2k_5}} e^{-\tau_3\epsilon_{k_3}^{k_6}} e^{-\tau_4\epsilon_{k}}$$

$$= \frac{(-1)^4}{2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{02}_{k_5k_2} \Omega^{11}_{k_6k_3} \Omega^{02}_{k_6k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_5}\ \epsilon_{k_3k_4}\ \epsilon_{k_4k_6}} \tag{815}$$



$\rightarrow$ T4:

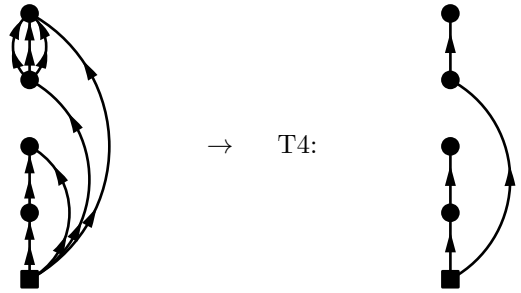
$$\mathrm{T4} = \frac{1}{(a_1+a_2)a_2(a_3+a_4)a_4} \tag{816}$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon_{k_2k_5}$$
$$a_3 = \epsilon^{k_6}_{k_3}$$
$$a_4 = \epsilon_{k_4k_6}$$

Diagram 402:

$$\mathrm{PO4.402} = \lim_{\tau\to\infty} \frac{(-1)^4}{(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{02}_{k_5k_2}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{04}_{k_6k_7k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1}}e^{-\tau_2\epsilon_{k_2k_5}}e^{-\tau_3\epsilon^{k}_{}}$$

$$= \frac{(-1)^4}{(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{02}_{k_5k_2}\Omega^{31}_{k_6k_7k_8k_3}\Omega^{04}_{k_6k_7k_8k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_5}\ \epsilon_{k_3k_4}\ \epsilon_{k_4k_6k_7k_8}} \tag{817}$$



$\rightarrow$ T4:

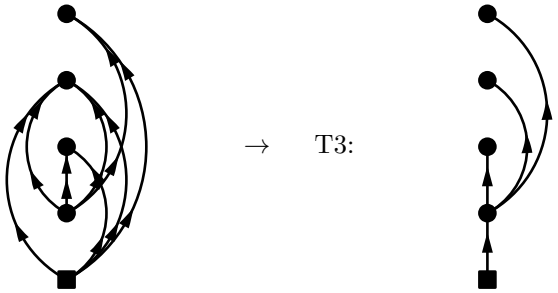
$$\mathrm{T4} = \frac{1}{(a_1+a_2)a_2(a_3+a_4)a_4} \tag{818}$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon_{k_2k_5}$$
$$a_3 = \epsilon^{k_6k_7k_8}_{k_3}$$
$$a_4 = \epsilon_{k_4k_6k_7k_8}$$

Diagram 403:

$$\mathrm{PO4.403} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{02}_{k_5k_1}\Omega^{04}_{k_6k_7k_2k_3}\Omega^{02}_{k_8k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)e^{-\tau_1\epsilon^{k_5k_6k}}$$

$$= \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{02}_{k_5k_1}\Omega^{04}_{k_6k_7k_2k_3}\Omega^{02}_{k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5}\ \epsilon_{k_2k_3k_6k_7}\ \epsilon_{k_4k_8}} \tag{819}$$



$\rightarrow$ T3:

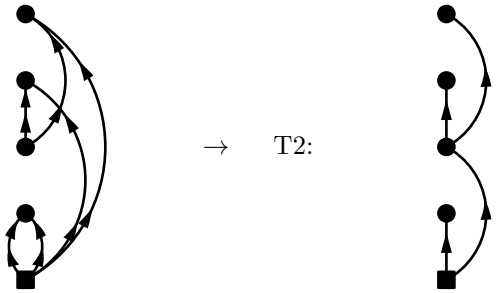
$$\mathrm{T3} = \frac{1}{(a_1+a_2+a_3+a_4)a_2a_3a_4} \tag{820}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_5}$$
$$a_3 = \epsilon_{k_2k_3k_6k_7}$$
$$a_4 = \epsilon_{k_4k_8}$$

Diagram 404:

$$\text{PO4.404} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{02}_{k_1k_2}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_5k_3}\Omega^{02}_{k_6k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon_{k_1k_2}}e^{-\tau_2\epsilon^{k_5k_6}}e^{-\tau_3\epsilon_{k_3k_5}}$$

$$= \frac{-(-1)^4}{2(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{02}_{k_1k_2}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_5k_3}\Omega^{02}_{k_6k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_3k_5}\ \epsilon_{k_4k_6}} \tag{821}$$



$\rightarrow$ T2:

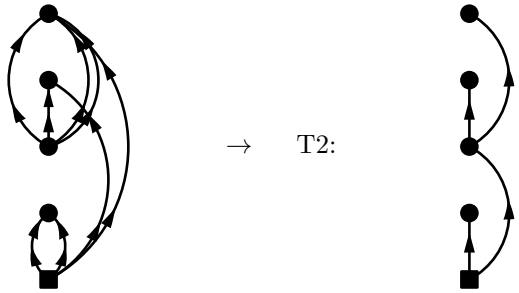
$$\text{T2} = \frac{1}{a_1(a_2+a_3+a_4)a_3a_4} \tag{822}$$

$$a_1 = \epsilon_{k_1k_2}$$
$$a_2 = \epsilon^{k_5k_6}$$
$$a_3 = \epsilon_{k_3k_5}$$
$$a_4 = \epsilon_{k_4k_6}$$

Diagram 405:

$$\text{PO4.405} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{02}_{k_1k_2}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{02}_{k_5k_3}\Omega^{04}_{k_6k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon_{k_1k_2}}e^{-\tau_2\epsilon^{k_5k_6k_7}}$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{02}_{k_1k_2}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{02}_{k_5k_3}\Omega^{04}_{k_6k_7k_8k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_3k_5}\ \epsilon_{k_4k_6k_7k_8}} \tag{823}$$



$\rightarrow$ T2:

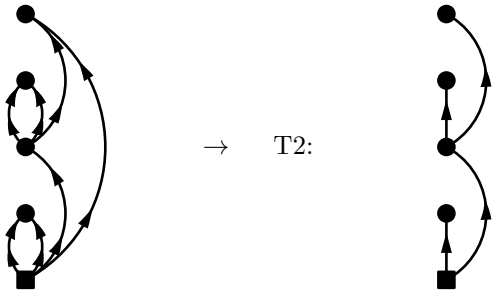
$$\text{T2} = \frac{1}{a_1(a_2+a_3+a_4)a_3a_4} \tag{824}$$

$$a_1 = \epsilon_{k_1k_2}$$
$$a_2 = \epsilon^{k_5k_6k_7k_8}$$
$$a_3 = \epsilon_{k_3k_5}$$
$$a_4 = \epsilon_{k_4k_6k_7k_8}$$

Diagram 406:

$$\text{PO4.406} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{02}_{k_1k_2}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{02}_{k_5k_6}\Omega^{02}_{k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)e^{-\tau_1\epsilon_{k_1k_2}}e^{-\tau_2\epsilon^{k_5k_6k_7}_{k_3}}e^{-\tau_3\epsilon_{k_3k_5}}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{02}_{k_1k_2}\Omega^{31}_{k_5k_6k_7k_3}\Omega^{02}_{k_5k_6}\Omega^{02}_{k_7k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_4k_7}} \tag{825}$$



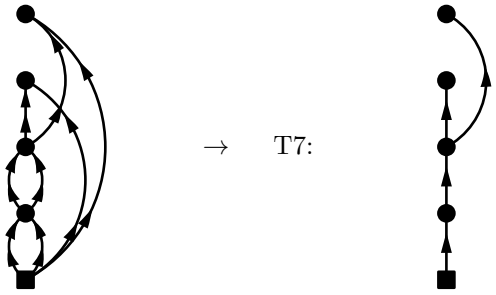
$\rightarrow$ T2:

$$\mathrm{T2} = \frac{1}{a_1(a_2+a_3+a_4)a_3a_4} \tag{826}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1k_2} \\ a_2 &= \epsilon_{k_3}^{k_5k_6k_7} \\ a_3 &= \epsilon_{k_5k_6} \\ a_4 &= \epsilon_{k_4k_7} \end{aligned}$$

Diagram 407:

$$\begin{aligned} \mathrm{PO4.407} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{02}_{k_7k_3} \Omega^{02}_{k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) e^{-\tau_1\epsilon^{k_5k_6}_{k_1k_2}} \epsilon \\ &= \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{02}_{k_7k_3} \Omega^{02}_{k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_3k_4}\ \epsilon_{k_3k_7}\ \epsilon_{k_4k_8}} \end{aligned} \tag{827}$$



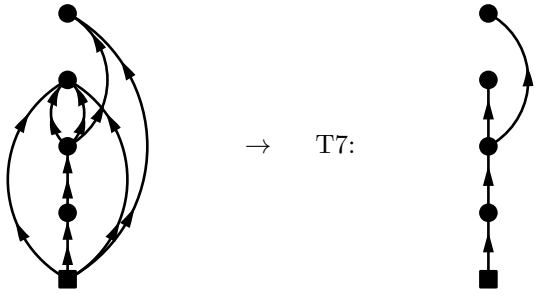
$\rightarrow$ T7:

$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{828}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1k_2}^{k_5k_6} \\ a_2 &= \epsilon_{k_5k_6}^{k_7k_8} \\ a_3 &= \epsilon_{k_3k_7} \\ a_4 &= \epsilon_{k_4k_8} \end{aligned}$$

Diagram 408:

$$\begin{aligned} \mathrm{PO4.408} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{31}_{k_6k_7k_8k_5} \Omega^{04}_{k_6k_7k_2k_3} \Omega^{02}_{k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) e^{-\tau_1\epsilon^{k_5}_{k_1}} e^{-\tau_2} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{31}_{k_6k_7k_8k_5} \Omega^{04}_{k_6k_7k_2k_3} \Omega^{02}_{k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_2k_3k_4}\ \epsilon_{k_2k_3k_6k_7}\ \epsilon_{k_4k_8}} \end{aligned} \tag{829}$$



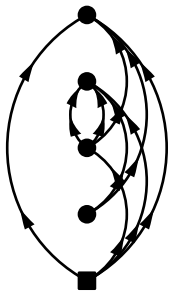
$\rightarrow$ T7:

$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{830}$$

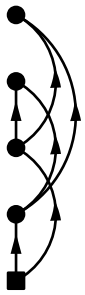
$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6k_7k_8}_{k_5} \\ a_3 &= \epsilon_{k_2k_3k_6k_7} \\ a_4 &= \epsilon_{k_4k_8} \end{aligned}$$

Diagram 409:

$$\begin{aligned} \mathrm{PO4.409} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{31}_{k_7k_8k_9k_1} \Omega^{04}_{k_7k_8k_5k_2} \Omega^{04}_{k_9k_6k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{31}_{k_7k_8k_9k_1} \Omega^{04}_{k_7k_8k_5k_2} \Omega^{04}_{k_9k_6k_3k_4} \left[\frac{1}{\epsilon_{k_2k_7k_8k_3k_4k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_7k_8}\ \epsilon_{k_3k_4k_6k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k} \right. \end{aligned} \tag{831}$$



$\rightarrow$ T10:

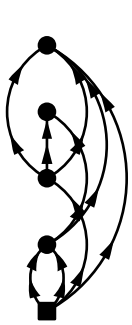


$$\mathrm{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{832}$$

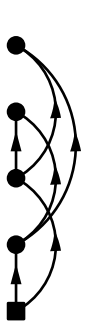
$$\begin{aligned} a_1 &= \epsilon^{k_5k_6} \\ a_2 &= \epsilon^{k_7k_8k_9}_{k_1} \\ a_3 &= \epsilon_{k_2k_5k_7k_8} \\ a_4 &= \epsilon_{k_3k_4k_6k_9} \end{aligned}$$

Diagram 410:

$$\begin{aligned} \mathrm{PO4.410} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_3} \Omega^{02}_{k_7k_5} \Omega^{04}_{k_8k_9k_6k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_3} \Omega^{02}_{k_7k_5} \Omega^{04}_{k_8k_9k_6k_4} \left[\frac{1}{\epsilon_{k_1k_2k_7k_4k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_7}\ \epsilon_{k_4k_6k_8k_9}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_4k} \right. \end{aligned} \tag{833}$$



$\rightarrow$ T10:

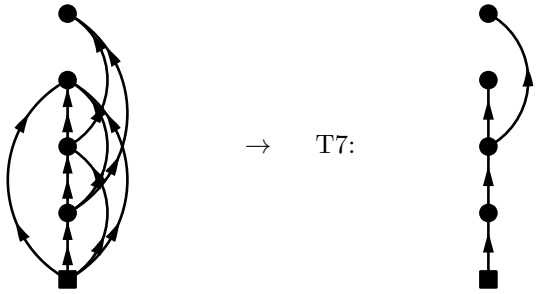


$$\mathrm{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{834}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\
a_2 &= \epsilon^{k_7 k_8 k_9}_{k_3} \\
a_3 &= \epsilon_{k_5 k_7} \\
a_4 &= \epsilon_{k_4 k_6 k_8 k_9}
\end{aligned}
$$

Diagram 411:

$$
\begin{aligned}
\text{PO4.411} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{22}_{k_8 k_9 k_5 k_2} \Omega^{04}_{k_8 k_6 k_3 k_4} \Omega^{02}_{k_9 k_7} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3 - \\
&= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{22}_{k_8 k_9 k_5 k_2} \Omega^{04}_{k_8 k_6 k_3 k_4} \Omega^{02}_{k_9 k_7}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_2 k_5 k_3 k_4 k_6 k_7}\ \epsilon_{k_3 k_4 k_6 k_8}\ \epsilon_{k_7 k_9}}
\end{aligned} \tag{835}
$$

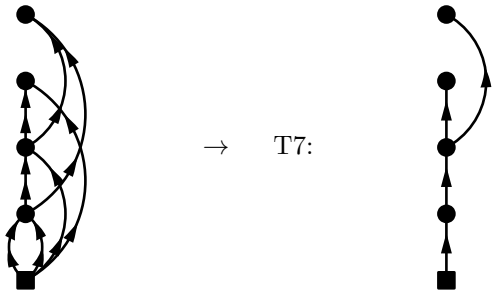


$$
\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3 a_4} \tag{836}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\
a_2 &= \epsilon^{k_8 k_9}_{k_2 k_5} \\
a_3 &= \epsilon_{k_3 k_4 k_6 k_8} \\
a_4 &= \epsilon_{k_7 k_9}
\end{aligned}
$$

Diagram 412:

$$
\begin{aligned}
\text{PO4.412} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_3} \Omega^{02}_{k_7 k_4} \Omega^{02}_{k_8 k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) \\
&= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_3} \Omega^{02}_{k_7 k_4} \Omega^{02}_{k_8 k_6}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_3 k_5 k_4 k_6}\ \epsilon_{k_4 k_7}\ \epsilon_{k_6 k_8}}
\end{aligned} \tag{837}
$$



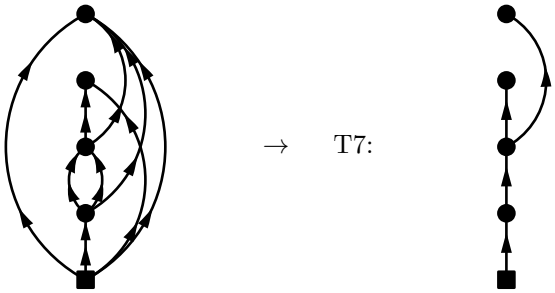
$$
\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3 a_4} \tag{838}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\
a_2 &= \epsilon^{k_7 k_8}_{k_3 k_5} \\
a_3 &= \epsilon_{k_4 k_7} \\
a_4 &= \epsilon_{k_6 k_8}
\end{aligned}
$$

Diagram 413:

$$\text{PO4.413} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{02}_{k_8k_2} \Omega^{04}_{k_9k_7k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{02}_{k_8k_2} \Omega^{04}_{k_9k_7k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_2k_3k_4k_7}\ \epsilon_{k_2k_8}\ \epsilon_{k_3k_4k_7k_9}} \tag{839}$$



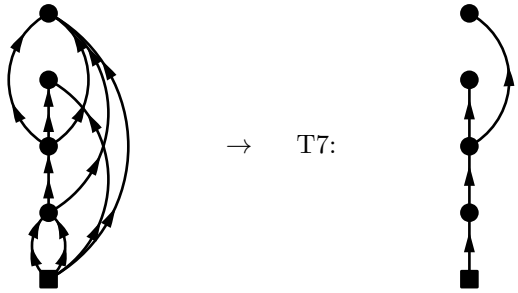
$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{840}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon^{k_8k_9}_{k_5k_6}$$
$$a_3 = \epsilon_{k_2k_8}$$
$$a_4 = \epsilon_{k_3k_4k_7k_9}$$

Diagram 414:

$$\text{PO4.414} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{02}_{k_7k_3} \Omega^{04}_{k_8k_9k_6k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{02}_{k_7k_3} \Omega^{04}_{k_8k_9k_6k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_3k_7}\ \epsilon_{k_4k_6k_8k_9}} \tag{841}$$



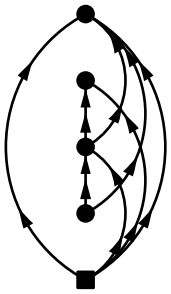
$$\text{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{842}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7k_8k_9}_{k_5}$$
$$a_3 = \epsilon_{k_3k_7}$$
$$a_4 = \epsilon_{k_4k_6k_8k_9}$$

Diagram 415:

$$\text{PO4.415} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_5k_1} \Omega^{02}_{k_7k_2} \Omega^{04}_{k_8k_6k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_5k_1} \Omega^{02}_{k_7k_2} \Omega^{04}_{k_8k_6k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_2k_3k_4k_6}\ \epsilon_{k_2k_7}\ \epsilon_{k_3k_4k_6k_8}} \tag{843}$$



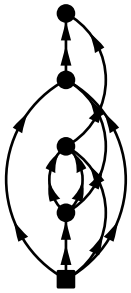
→ T7:

$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{844}$$

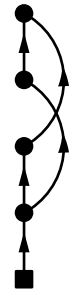
$$\begin{aligned} a_1 &= \epsilon^{k_5k_6} \\ a_2 &= \epsilon^{k_7k_8}_{k_1k_5} \\ a_3 &= \epsilon_{k_2k_7} \\ a_4 &= \epsilon_{k_3k_4k_6k_8} \end{aligned}$$

Diagram 416:

$$\begin{aligned} \mathrm{PO4.416} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_6k_2} \Omega^{13}_{k_9k_7k_3k_4} \Omega^{02}_{k_9k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{13}_{k_8k_5k_6k_2} \Omega^{13}_{k_9k_7k_3k_4} \Omega^{02}_{k_9k_8} \left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_6k_9}\ \epsilon_{k_2k_5k_6k_3k_4k_7}\ \epsilon_{k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_6k} \right. \end{aligned} \tag{845}$$



→ T11:

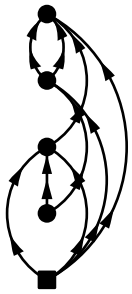


$$\mathrm{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{846}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_2k_5k_6} \\ a_3 &= \epsilon^{k_9}_{k_3k_4k_7} \\ a_4 &= \epsilon_{k_8k_9} \end{aligned}$$

Diagram 417:

$$\begin{aligned} \mathrm{PO4.417} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_1k_2} \Omega^{22}_{k_8k_9k_6k_3} \Omega^{04}_{k_8k_9k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_1k_2} \Omega^{22}_{k_8k_9k_6k_3} \Omega^{04}_{k_8k_9k_7k_4} \left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_4k_8k_9}\ \epsilon_{k_1k_2k_5k_3k_6k_4}\ \epsilon_{k_4k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_4} \right. \end{aligned} \tag{847}$$



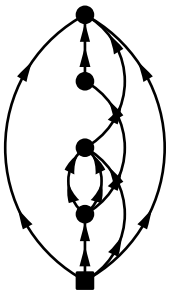
$\rightarrow$ T11:

$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{848}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6} \\ a_2 &= \epsilon^{k_7}_{k_1 k_2 k_5} \\ a_3 &= \epsilon^{k_8 k_9}_{k_3 k_6} \\ a_4 &= \epsilon_{k_4 k_7 k_8 k_9} \end{aligned}$$

Diagram 418:

$$\begin{aligned} \text{PO4.418} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_6 k_2} \Omega^{11}_{k_9 k_7} \Omega^{04}_{k_9 k_8 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_6 k_2} \Omega^{11}_{k_9 k_7} \Omega^{04}_{k_9 k_8 k_3 k_4} \left[\frac{1}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_2 k_5 k_6 k_3 k_4 k_9}\ \epsilon_{k_2 k_5 k_6 k_7 k_3 k_4}\ \epsilon_{k_3 k_4 k_8 k_9}} + \frac{}{\epsilon_{k_1 k_2 k_3 k_4}} \right. \end{aligned} \tag{849}$$



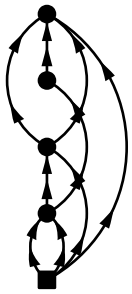
$\rightarrow$ T11:

$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{850}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_2 k_5 k_6} \\ a_3 &= \epsilon^{k_9}_{k_7} \\ a_4 &= \epsilon_{k_3 k_4 k_8 k_9} \end{aligned}$$

Diagram 419:

$$\begin{aligned} \text{PO4.419} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_3} \Omega^{11}_{k_9 k_6} \Omega^{04}_{k_9 k_7 k_8 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_3} \Omega^{11}_{k_9 k_6} \Omega^{04}_{k_9 k_7 k_8 k_4} \left[\frac{1}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_3 k_5 k_4 k_9}\ \epsilon_{k_3 k_5 k_6 k_4}\ \epsilon_{k_4 k_7 k_8 k_9}} + \frac{}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_3 k_5 k_} \right. \end{aligned} \tag{851}$$



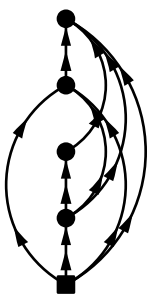
$\rightarrow$ T11:

$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \quad (852)$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7 k_8}_{k_3 k_5} \\ a_3 &= \epsilon^{k_9}_{k_6} \\ a_4 &= \epsilon_{k_4 k_7 k_8 k_9} \end{aligned}$$

Diagram 420:

$$\begin{aligned} \text{PO4.420} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{11}_{k_8 k_5} \Omega^{13}_{k_9 k_6 k_2 k_3} \Omega^{04}_{k_9 k_8 k_7 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{11}_{k_8 k_5} \Omega^{13}_{k_9 k_6 k_2 k_3} \Omega^{04}_{k_9 k_8 k_7 k_4} \left[\frac{1}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_4 k_7 k_9}\ \epsilon_{k_5 k_2 k_3 k_6 k_4 k_7}\ \epsilon_{k_4 k_7 k_8 k_9}} + \frac{}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k} \right. \end{aligned} \quad (853)$$



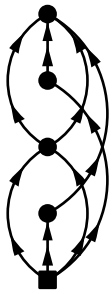
$\rightarrow$ T11:

$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \quad (854)$$

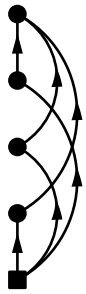
$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_5} \\ a_3 &= \epsilon^{k_9}_{k_2 k_3 k_6} \\ a_4 &= \epsilon_{k_4 k_7 k_8 k_9} \end{aligned}$$

Diagram 421:

$$\begin{aligned} \text{PO4.421} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{22}_{k_6 k_7 k_2 k_3} \Omega^{11}_{k_8 k_4} \Omega^{04}_{k_8 k_6 k_7 k_5} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1}} e^{- \\ &= \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{22}_{k_6 k_7 k_2 k_3} \Omega^{11}_{k_8 k_4} \Omega^{04}_{k_8 k_6 k_7 k_5} \left[\frac{1}{\epsilon_{k_1 k_2 k_3 k_8}\ \epsilon_{k_2 k_3 k_5 k_8}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_6 k_7 k_8}} + \frac{1}{\epsilon_{k_1 k_6 k_7 k_8}\ \epsilon_{k_1 k_2 k_3 k_8}\ } \right. \end{aligned} \quad (855)$$



$\rightarrow$ T8:

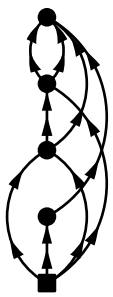


$$\text{T8} = \frac{1}{(a_1+a_2+a_4)(a_2+a_4)(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_4)(a_2+a_1+a_4)(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_4)(a_2+a_1+a_3+} \tag{856}$$

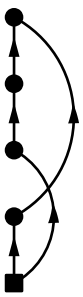
$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_5} \\ a_2 &= \epsilon_{k_2 k_3}^{k_6 k_7} \\ a_3 &= \epsilon_{k_4}^{k_8} \\ a_4 &= \epsilon_{k_5 k_6 k_7 k_8} \end{aligned}$$

Diagram 422:

$$\begin{aligned} \text{PO4.422} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{22}_{k_6k_7k_2k_3} \Omega^{22}_{k_8k_9k_6k_4} \Omega^{04}_{k_8k_9k_7k_5} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{22}_{k_6k_7k_2k_3} \Omega^{22}_{k_8k_9k_6k_4} \Omega^{04}_{k_8k_9k_7k_5} \left[\frac{1}{\epsilon_{k_1k_7k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_4k_6k_7}\ \epsilon_{k_5k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_4k_6k_7}\ \epsilon_{k_1k_2k_3k} \right. \end{aligned} \tag{857}$$



$\rightarrow$ T12:

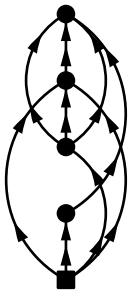


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{858}$$

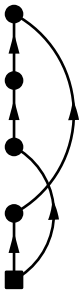
$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_5} \\ a_2 &= \epsilon_{k_2 k_3}^{k_6 k_7} \\ a_3 &= \epsilon_{k_4 k_6}^{k_8 k_9} \\ a_4 &= \epsilon_{k_5 k_7 k_8 k_9} \end{aligned}$$

Diagram 423:

$$\begin{aligned} \text{PO4.423} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{31}_{k_6k_7k_8k_2} \Omega^{13}_{k_9k_6k_3k_4} \Omega^{04}_{k_9k_7k_8k_5} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{31}_{k_6k_7k_8k_2} \Omega^{13}_{k_9k_6k_3k_4} \Omega^{04}_{k_9k_7k_8k_5} \left[\frac{1}{\epsilon_{k_1k_7k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_3k_4k_6k_7k_8}\ \epsilon_{k_5k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_3k_4k_6k_7k} \right. \end{aligned} \tag{859}$$



$\rightarrow$ T12:

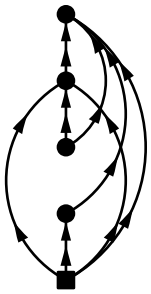


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{860}$$

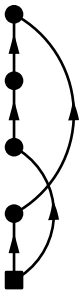
$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6 k_7 k_8}_{k_2} \\ a_3 &= \epsilon^{k_9}_{k_3 k_4 k_6} \\ a_4 &= \epsilon_{k_5 k_7 k_8 k_9} \end{aligned}$$

Diagram 424:

$$\begin{aligned} \text{PO4.424} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{20}_{k_6k_7} \Omega^{13}_{k_8k_6k_2k_3} \Omega^{04}_{k_8k_7k_5k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3) e^{\cdot} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{20}_{k_6k_7} \Omega^{13}_{k_8k_6k_2k_3} \Omega^{04}_{k_8k_7k_5k_4} \left[\frac{1}{\epsilon_{k_1k_4k_7k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_6k_4k_7}\ \epsilon_{k_4k_5k_7k_8}} + \frac{}{\epsilon_{k_1k_2k_3k_6k_4k_7}\ \epsilon_{k_1k}} \right. \end{aligned} \tag{861}$$



$\rightarrow$ T12:

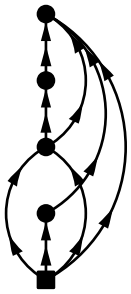


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{862}$$

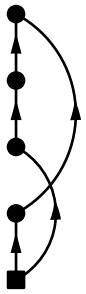
$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6 k_7} \\ a_3 &= \epsilon^{k_8}_{k_2 k_3 k_6} \\ a_4 &= \epsilon_{k_4 k_5 k_7 k_8} \end{aligned}$$

Diagram 425:

$$\begin{aligned} \text{PO4.425} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{22}_{k_6k_7k_2k_3} \Omega^{11}_{k_8k_6} \Omega^{04}_{k_8k_7k_5k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3) e^{\cdot} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{22}_{k_6k_7k_2k_3} \Omega^{11}_{k_8k_6} \Omega^{04}_{k_8k_7k_5k_4} \left[\frac{1}{\epsilon_{k_1k_4k_7k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_6k_4k_7}\ \epsilon_{k_4k_5k_7k_8}} + \frac{1}{\epsilon_{k_1k_6k_4k_7}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k} } \right. \end{aligned} \tag{863}$$



$\rightarrow$ T12:

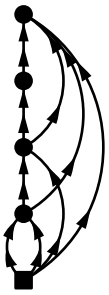


$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{864}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6 k_7}_{k_2 k_3} \\ a_3 &= \epsilon^{k_8}_{k_6} \\ a_4 &= \epsilon_{k_4 k_5 k_7 k_8} \end{aligned}$$

Diagram 426:

$$\begin{aligned} \text{PO4.426} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_3} \Omega^{11}_{k_9 k_7} \Omega^{04}_{k_9 k_8 k_6 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_3} \Omega^{11}_{k_9 k_7} \Omega^{04}_{k_9 k_8 k_6 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_3 k_5 k_4 k_6}\ \epsilon_{k_7 k_4 k_6 k_8}\ \epsilon_{k_4 k_6 k_8 k_9}} \end{aligned} \tag{865}$$



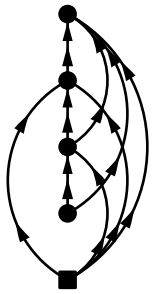
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{866}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7 k_8}_{k_3 k_5} \\ a_3 &= \epsilon^{k_9}_{k_7} \\ a_4 &= \epsilon_{k_4 k_6 k_8 k_9} \end{aligned}$$

Diagram 427:

$$\begin{aligned} \text{PO4.427} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{22}_{k_7 k_8 k_5 k_1} \Omega^{13}_{k_9 k_7 k_2 k_3} \Omega^{04}_{k_9 k_8 k_6 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{22}_{k_7 k_8 k_5 k_1} \Omega^{13}_{k_9 k_7 k_2 k_3} \Omega^{04}_{k_9 k_8 k_6 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_5 k_2 k_3 k_4 k_6}\ \epsilon_{k_2 k_3 k_7 k_4 k_6 k_8}\ \epsilon_{k_4 k_6 k_8 k_9}} \end{aligned} \tag{867}$$



$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{868}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6} \\ a_2 &= \epsilon^{k_7 k_8}_{k_1 k_5} \\ a_3 &= \epsilon^{k_9}_{k_2 k_3 k_7} \\ a_4 &= \epsilon_{k_4 k_6 k_8 k_9} \end{aligned}$$

Diagram 428:

$$\begin{aligned} \mathrm{PO4.428} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{20}_{k_7k_8} \Omega^{13}_{k_9k_7k_5k_3} \Omega^{04}_{k_9k_8k_6k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{20}_{k_7k_8} \Omega^{13}_{k_9k_7k_5k_3} \Omega^{04}_{k_9k_8k_6k_4} \left[\frac{1}{\epsilon_{k_1k_2k_3k_7k_4k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_7k_4k_6k_8}\ \epsilon_{k_4k_6k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_3k} \right. \end{aligned} \tag{869}$$

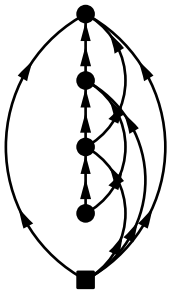
$\rightarrow$ T13:

$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{870}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7 k_8} \\ a_3 &= \epsilon^{k_9}_{k_3 k_5 k_7} \\ a_4 &= \epsilon_{k_4 k_6 k_8 k_9} \end{aligned}$$

Diagram 429:

$$\begin{aligned} \mathrm{PO4.429} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_5k_1} \Omega^{13}_{k_9k_7k_6k_2} \Omega^{04}_{k_9k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_5k_1} \Omega^{13}_{k_9k_7k_6k_2} \Omega^{04}_{k_9k_8k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_2k_6k_3k_4}\ \epsilon_{k_2k_6k_7k_3k_4k_8}\ \epsilon_{k_3k_4k_8k_9}} \end{aligned} \tag{871}$$



$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{872}$$

$$a_1 = \epsilon^{k_5 k_6}$$
$$a_2 = \epsilon^{k_7 k_8}_{k_1 k_5}$$
$$a_3 = \epsilon^{k_9}_{k_2 k_6 k_7}$$
$$a_4 = \epsilon_{k_3 k_4 k_8 k_9}$$

Diagram 430:

$$\text{PO4.430} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_3} \Omega^{13}_{k_9 k_7 k_6 k_4} \Omega^{02}_{k_9 k_8} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-$$
$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_3} \Omega^{13}_{k_9 k_7 k_6 k_4} \Omega^{02}_{k_9 k_8}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_3 k_5 k_4 k_6}\ \epsilon_{k_4 k_6 k_7 k_8}\ \epsilon_{k_8 k_9}} \tag{873}$$

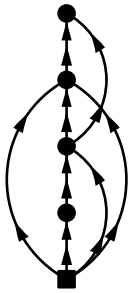
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{874}$$

$$a_1 = \epsilon^{k_5 k_6}_{k_1 k_2}$$
$$a_2 = \epsilon^{k_7 k_8}_{k_3 k_5}$$
$$a_3 = \epsilon^{k_9}_{k_4 k_6 k_7}$$
$$a_4 = \epsilon_{k_8 k_9}$$

Diagram 431:

$$\text{PO4.431} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{22}_{k_6 k_7 k_5 k_2} \Omega^{13}_{k_8 k_6 k_3 k_4} \Omega^{02}_{k_8 k_7} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)e$$
$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{22}_{k_6 k_7 k_5 k_2} \Omega^{13}_{k_8 k_6 k_3 k_4} \Omega^{02}_{k_8 k_7}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_2 k_5 k_3 k_4}\ \epsilon_{k_3 k_4 k_6 k_7}\ \epsilon_{k_7 k_8}} \tag{875}$$



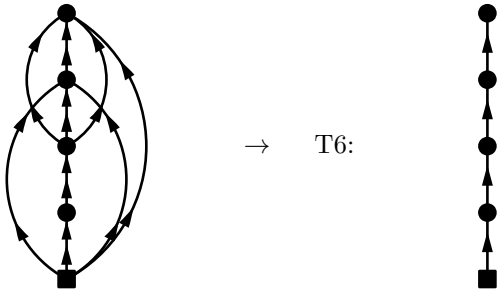
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{876}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6 k_7}_{k_2 k_5} \\ a_3 &= \epsilon^{k_8}_{k_3 k_4 k_6} \\ a_4 &= \epsilon_{k_7 k_8} \end{aligned}$$

Diagram 432:

$$\begin{aligned} \mathrm{PO4.432} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{31}_{k_6k_7k_8k_5} \Omega^{13}_{k_9k_6k_2k_3} \Omega^{04}_{k_9k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{31}_{k_6k_7k_8k_5} \Omega^{13}_{k_9k_6k_2k_3} \Omega^{04}_{k_9k_7k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_2k_3k_4}\ \epsilon_{k_2k_3k_6k_4k_7k_8}\ \epsilon_{k_4k_7k_8k_9}} \end{aligned} \tag{877}$$

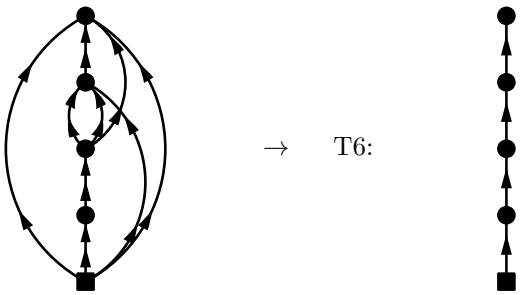


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{878}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6 k_7 k_8}_{k_5} \\ a_3 &= \epsilon^{k_9}_{k_2 k_3 k_6} \\ a_4 &= \epsilon_{k_4 k_7 k_8 k_9} \end{aligned}$$

Diagram 433:

$$\begin{aligned} \mathrm{PO4.433} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{31}_{k_6k_7k_8k_5} \Omega^{13}_{k_9k_6k_7k_2} \Omega^{04}_{k_9k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{31}_{k_6k_7k_8k_5} \Omega^{13}_{k_9k_6k_7k_2} \Omega^{04}_{k_9k_8k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_2k_3k_4}\ \epsilon_{k_2k_6k_7k_3k_4k_8}\ \epsilon_{k_3k_4k_8k_9}} \end{aligned} \tag{879}$$

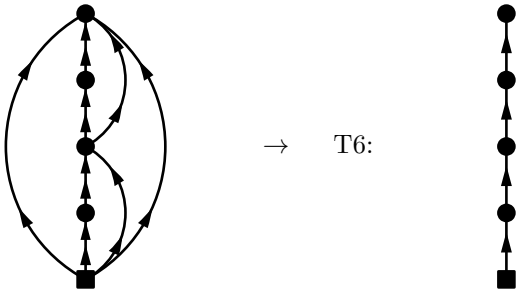


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{880}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5}_{k_1} \\
a_2 &= \epsilon^{k_6 k_7 k_8}_{k_5} \\
a_3 &= \epsilon^{k_9}_{k_2 k_6 k_7} \\
a_4 &= \epsilon_{k_3 k_4 k_8 k_9}
\end{aligned}
$$

Diagram 434:

$$
\begin{aligned}
\text{PO4.434} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{22}_{k_6 k_7 k_5 k_2} \Omega^{11}_{k_8 k_6} \Omega^{04}_{k_8 k_7 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3) e^{\cdot} \\
&= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{22}_{k_6 k_7 k_5 k_2} \Omega^{11}_{k_8 k_6} \Omega^{04}_{k_8 k_7 k_3 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_2 k_5 k_3 k_4}\ \epsilon_{k_6 k_3 k_4 k_7}\ \epsilon_{k_3 k_4 k_7 k_8}}
\end{aligned} \tag{881}
$$

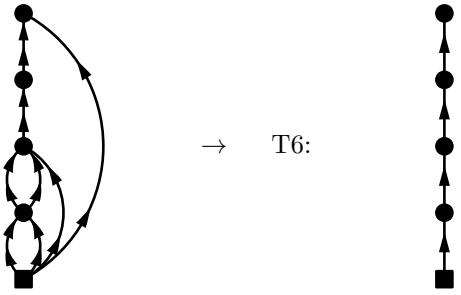


$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{882}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5}_{k_1} \\
a_2 &= \epsilon^{k_6 k_7}_{k_2 k_5} \\
a_3 &= \epsilon^{k_8}_{k_6} \\
a_4 &= \epsilon_{k_3 k_4 k_7 k_8}
\end{aligned}
$$

Diagram 435:

$$
\begin{aligned}
\text{PO4.435} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{13}_{k_7 k_5 k_6 k_3} \Omega^{11}_{k_8 k_7} \Omega^{02}_{k_8 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k_6}_{k_1 k_2}} e^{-} \\
&= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{13}_{k_7 k_5 k_6 k_3} \Omega^{11}_{k_8 k_7} \Omega^{02}_{k_8 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_3 k_5 k_6 k_4}\ \epsilon_{k_7 k_4}\ \epsilon_{k_4 k_8}}
\end{aligned} \tag{883}
$$



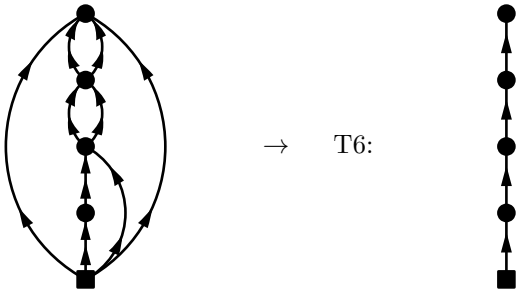
$$
\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{884}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\
a_2 &= \epsilon^{k_7}_{k_3 k_5 k_6} \\
a_3 &= \epsilon^{k_8}_{k_7} \\
a_4 &= \epsilon_{k_4 k_8}
\end{aligned}
$$

Diagram 436:

$$\text{PO4.436} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{22}_{k_6k_7k_5k_2} \Omega^{22}_{k_8k_9k_6k_7} \Omega^{04}_{k_8k_9k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5}_{k_1}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{22}_{k_6k_7k_5k_2} \Omega^{22}_{k_8k_9k_6k_7} \Omega^{04}_{k_8k_9k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_3k_4}\ \epsilon_{k_6k_7k_3k_4}\ \epsilon_{k_3k_4k_8k_9}} \tag{885}$$



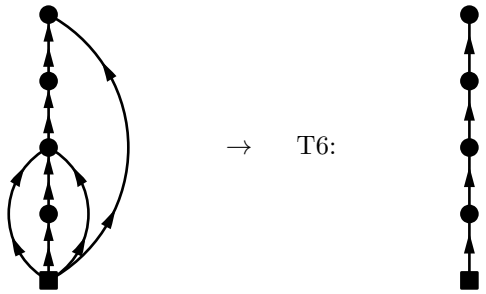
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{886}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6k_7}_{k_2k_5} \\ a_3 &= \epsilon^{k_8k_9}_{k_6k_7} \\ a_4 &= \epsilon_{k_3k_4k_8k_9} \end{aligned}$$

Diagram 437:

$$\text{PO4.437} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{13}_{k_6k_5k_2k_3} \Omega^{11}_{k_7k_6} \Omega^{02}_{k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5}_{k_1}} e^{-\tau_2\epsilon^{k_6}_{k_2k_5}}$$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{13}_{k_6k_5k_2k_3} \Omega^{11}_{k_7k_6} \Omega^{02}_{k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_4}\ \epsilon_{k_6k_4}\ \epsilon_{k_4k_7}} \tag{887}$$



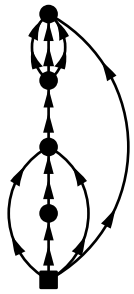
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{888}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6}_{k_2k_3k_5} \\ a_3 &= \epsilon^{k_7}_{k_6} \\ a_4 &= \epsilon_{k_4k_7} \end{aligned}$$

Diagram 438:

$$\text{PO4.438} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{13}_{k_6k_5k_2k_3} \Omega^{31}_{k_7k_8k_9k_6} \Omega^{04}_{k_7k_8k_9k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5}_{k_1}}$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{13}_{k_6k_5k_2k_3} \Omega^{31}_{k_7k_8k_9k_6} \Omega^{04}_{k_7k_8k_9k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_4}\ \epsilon_{k_6k_4}\ \epsilon_{k_4k_7k_8k_9}} \tag{889}$$



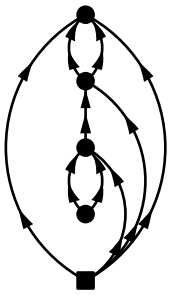
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{890}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon^{k_6}_{k_2 k_3 k_5} \\ a_3 &= \epsilon^{k_7 k_8 k_9}_{k_6} \\ a_4 &= \epsilon_{k_4 k_7 k_8 k_9} \end{aligned}$$

Diagram 439:

$$\begin{aligned} \text{PO4.439} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_6k_1} \Omega^{22}_{k_8k_9k_7k_2} \Omega^{04}_{k_8k_9k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k} \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_6k_1} \Omega^{22}_{k_8k_9k_7k_2} \Omega^{04}_{k_8k_9k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_2k_3k_4}\ \epsilon_{k_2k_7k_3k_4}\ \epsilon_{k_3k_4k_8k_9}} \end{aligned} \tag{891}$$



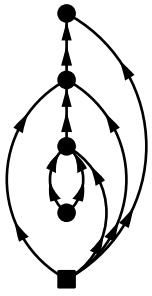
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{892}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6} \\ a_2 &= \epsilon^{k_7}_{k_1 k_5 k_6} \\ a_3 &= \epsilon^{k_8 k_9}_{k_2 k_7} \\ a_4 &= \epsilon_{k_3 k_4 k_8 k_9} \end{aligned}$$

Diagram 440:

$$\begin{aligned} \text{PO4.440} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_6k_1} \Omega^{13}_{k_8k_7k_2k_3} \Omega^{02}_{k_8k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k_6}} e^{-} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_6k_1} \Omega^{13}_{k_8k_7k_2k_3} \Omega^{02}_{k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_2k_3k_4}\ \epsilon_{k_2k_3k_7k_4}\ \epsilon_{k_4k_8}} \end{aligned} \tag{893}$$



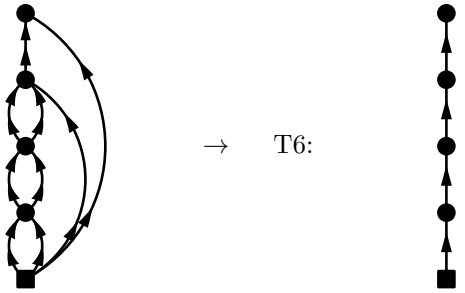
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{894}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6} \\ a_2 &= \epsilon^{k_7}_{k_1 k_5 k_6} \\ a_3 &= \epsilon^{k_8}_{k_2 k_3 k_7} \\ a_4 &= \epsilon_{k_4 k_8} \end{aligned}$$

Diagram 441:

$$\begin{aligned} \mathrm{PO4.441} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_6} \Omega^{13}_{k_9 k_7 k_8 k_3} \Omega^{02}_{k_9 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k}_{k_1 k}} \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_6} \Omega^{13}_{k_9 k_7 k_8 k_3} \Omega^{02}_{k_9 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_6 k_3 k_4}\ \epsilon_{k_3 k_7 k_8 k_4}\ \epsilon_{k_4 k_9}} \end{aligned} \tag{895}$$

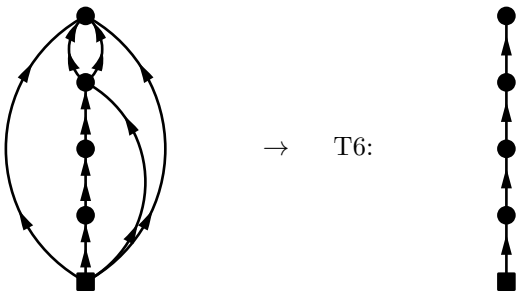


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{896}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7 k_8}_{k_5 k_6} \\ a_3 &= \epsilon^{k_9}_{k_3 k_7 k_8} \\ a_4 &= \epsilon_{k_4 k_9} \end{aligned}$$

Diagram 442:

$$\begin{aligned} \mathrm{PO4.442} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{11}_{k_6 k_5} \Omega^{22}_{k_7 k_8 k_6 k_2} \Omega^{04}_{k_7 k_8 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1}} e^{-\tau_2} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{11}_{k_6 k_5} \Omega^{22}_{k_7 k_8 k_6 k_2} \Omega^{04}_{k_7 k_8 k_3 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_2 k_3 k_4}\ \epsilon_{k_2 k_6 k_3 k_4}\ \epsilon_{k_3 k_4 k_7 k_8}} \end{aligned} \tag{897}$$

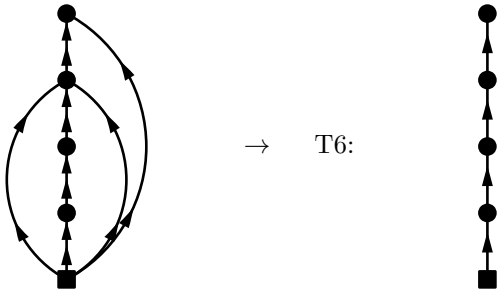


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{898}$$

$$a_1 = \epsilon_{k_1}^{k_5}$$
$$a_2 = \epsilon_{k_5}^{k_6}$$
$$a_3 = \epsilon_{k_2 k_6}^{k_7 k_8}$$
$$a_4 = \epsilon_{k_3 k_4 k_7 k_8}$$

Diagram 443:

$$\text{PO4.443} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{11}_{k_6 k_5} \Omega^{13}_{k_7 k_6 k_2 k_3} \Omega^{02}_{k_7 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1}} e^{-\tau_2 \epsilon^{k_6}_{k_5}} e$$
$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{11}_{k_6 k_5} \Omega^{13}_{k_7 k_6 k_2 k_3} \Omega^{02}_{k_7 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_2 k_3 k_4}\ \epsilon_{k_2 k_3 k_6 k_4}\ \epsilon_{k_4 k_7}} \tag{899}$$

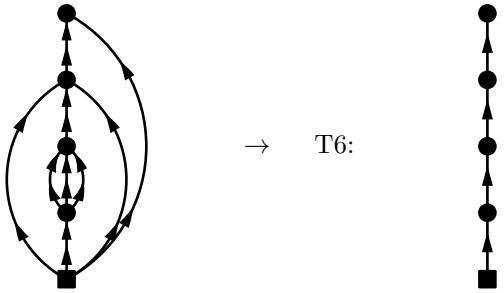


$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{900}$$

$$a_1 = \epsilon_{k_1}^{k_5}$$
$$a_2 = \epsilon_{k_5}^{k_6}$$
$$a_3 = \epsilon_{k_2 k_3 k_6}^{k_7}$$
$$a_4 = \epsilon_{k_4 k_7}$$

Diagram 444:

$$\text{PO4.444} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_6 k_7} \Omega^{13}_{k_9 k_8 k_2 k_3} \Omega^{02}_{k_9 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_9}_{k_9}}$$
$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_6 k_7} \Omega^{13}_{k_9 k_8 k_2 k_3} \Omega^{02}_{k_9 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_6 k_7 k_2 k_3 k_4}\ \epsilon_{k_2 k_3 k_8 k_4}\ \epsilon_{k_4 k_9}} \tag{901}$$



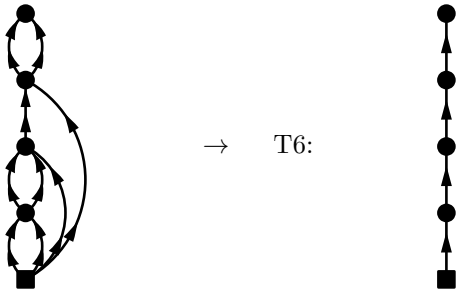
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{902}$$

$$a_1 = \epsilon_{k_1}^{k_5 k_6 k_7}$$
$$a_2 = \epsilon_{k_5 k_6 k_7}^{k_8}$$
$$a_3 = \epsilon_{k_2 k_3 k_8}^{k_9}$$
$$a_4 = \epsilon_{k_4 k_9}$$

Diagram 445:

$$\text{PO4.445} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{13}_{k_7k_5k_6k_3} \Omega^{22}_{k_8k_9k_7k_4} \Omega^{02}_{k_8k_9} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k}_{k_1k}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{13}_{k_7k_5k_6k_3} \Omega^{22}_{k_8k_9k_7k_4} \Omega^{02}_{k_8k_9}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_6k_4}\ \epsilon_{k_4k_7}\ \epsilon_{k_8k_9}} \tag{903}$$



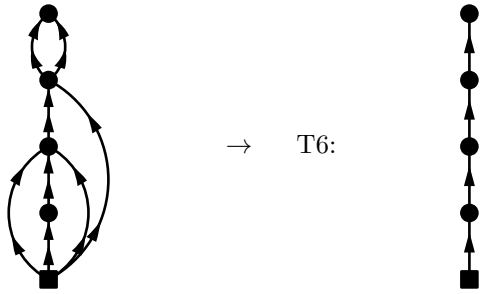
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{904}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7}_{k_3k_5k_6}$$
$$a_3 = \epsilon^{k_8k_9}_{k_4k_7}$$
$$a_4 = \epsilon_{k_8k_9}$$

Diagram 446:

$$\text{PO4.446} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{13}_{k_6k_5k_2k_3} \Omega^{22}_{k_7k_8k_6k_4} \Omega^{02}_{k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5}_{k_1}} e^{-\tau_2}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{13}_{k_6k_5k_2k_3} \Omega^{22}_{k_7k_8k_6k_4} \Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_4}\ \epsilon_{k_4k_6}\ \epsilon_{k_7k_8}} \tag{905}$$



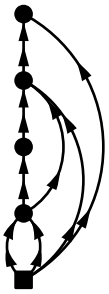
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{906}$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6}_{k_2k_3k_5}$$
$$a_3 = \epsilon^{k_7k_8}_{k_4k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 447:

$$\text{PO4.447} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_5} \Omega^{13}_{k_8k_7k_6k_3} \Omega^{02}_{k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-}$$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_5} \Omega^{13}_{k_8k_7k_6k_3} \Omega^{02}_{k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_3k_6k_4}\ \epsilon_{k_3k_6k_7k_4}\ \epsilon_{k_4k_8}} \tag{907}$$



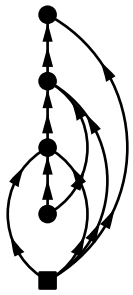
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{908}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7}_{k_5} \\ a_3 &= \epsilon^{k_8}_{k_3 k_6 k_7} \\ a_4 &= \epsilon_{k_4 k_8} \end{aligned}$$

Diagram 448:

$$\begin{aligned} \text{PO4.448} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_5 k_1 k_2} \Omega^{13}_{k_8 k_7 k_6 k_3} \Omega^{02}_{k_8 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{\cdot} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_5 k_1 k_2} \Omega^{13}_{k_8 k_7 k_6 k_3} \Omega^{02}_{k_8 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_2 k_5 k_3 k_6 k_4}\ \epsilon_{k_3 k_6 k_7 k_4}\ \epsilon_{k_4 k_8}} \end{aligned} \tag{909}$$



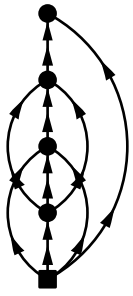
$\rightarrow$ T6:

$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{910}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6} \\ a_2 &= \epsilon^{k_7}_{k_1 k_2 k_5} \\ a_3 &= \epsilon^{k_8}_{k_3 k_6 k_7} \\ a_4 &= \epsilon_{k_4 k_8} \end{aligned}$$

Diagram 449:

$$\begin{aligned} \text{PO4.449} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_2 k_3} \Omega^{13}_{k_9 k_8 k_6 k_7} \Omega^{02}_{k_9 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_2 k_3} \Omega^{13}_{k_9 k_8 k_6 k_7} \Omega^{02}_{k_9 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_2 k_3 k_5 k_6 k_7 k_4}\ \epsilon_{k_6 k_7 k_8 k_4}\ \epsilon_{k_4 k_9}} \end{aligned} \tag{911}$$



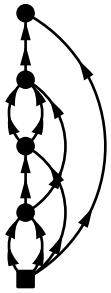
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{912}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_5 k_6 k_7} \\ a_2 &= \epsilon_{k_2 k_3 k_5}^{k_8} \\ a_3 &= \epsilon_{k_6 k_7 k_8}^{k_9} \\ a_4 &= \epsilon_{k_4 k_9} \end{aligned}$$

Diagram 450:

$$\begin{aligned} \mathrm{PO4.450} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_3} \Omega^{13}_{k_9k_7k_8k_6} \Omega^{02}_{k_9k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_3} \Omega^{13}_{k_9k_7k_8k_6} \Omega^{02}_{k_9k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_6k_4}\ \epsilon_{k_6k_7k_8k_4}\ \epsilon_{k_4k_9}} \end{aligned} \tag{913}$$



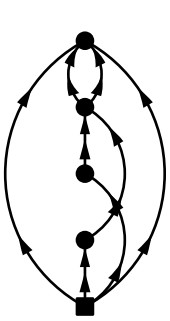
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{914}$$

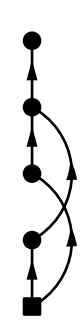
$$\begin{aligned} a_1 &= \epsilon_{k_1k_2}^{k_5k_6} \\ a_2 &= \epsilon_{k_3k_5}^{k_7k_8} \\ a_3 &= \epsilon_{k_6k_7k_8}^{k_9} \\ a_4 &= \epsilon_{k_4k_9} \end{aligned}$$

Diagram 451:

$$\begin{aligned} \mathrm{PO4.451} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{11}_{k_6k_2} \Omega^{22}_{k_7k_8k_6k_5} \Omega^{04}_{k_7k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5}_{k_1}} e^{- \\ &= \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{11}_{k_6k_2} \Omega^{22}_{k_7k_8k_6k_5} \Omega^{04}_{k_7k_8k_3k_4} \left[\frac{1}{\epsilon_{k_1k_6k_3k_4}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_3k_4}\ \epsilon_{k_3k_4k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_3k_4}\ } \right. \end{aligned} \tag{915}$$



$\rightarrow$ T13:

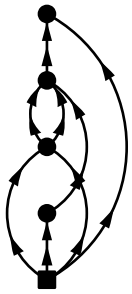


$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{916}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5}_{k_1} \\
a_2 &= \epsilon^{k_6}_{k_2} \\
a_3 &= \epsilon^{k_7 k_8}_{k_5 k_6} \\
a_4 &= \epsilon_{k_3 k_4 k_7 k_8}
\end{aligned}
$$

Diagram 452:

$$
\begin{aligned}
\text{PO4.452} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{22}_{k_6 k_7 k_2 k_3} \Omega^{13}_{k_8 k_6 k_7 k_5} \Omega^{02}_{k_8 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1}} e^{-\tau_2} \\
&= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{11}_{k_5 k_1} \Omega^{22}_{k_6 k_7 k_2 k_3} \Omega^{13}_{k_8 k_6 k_7 k_5} \Omega^{02}_{k_8 k_4} \left[\frac{1}{\epsilon_{k_1 k_6 k_7 k_4}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_6 k_7 k_4}\ \epsilon_{k_4 k_8}} + \frac{1}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_2 k_3 k_5 k_4}\ \epsilon_{k_5 k_6 k} \right.
\end{aligned}
\tag{917}
$$



$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{918}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5}_{k_1} \\
a_2 &= \epsilon^{k_6 k_7}_{k_2 k_3} \\
a_3 &= \epsilon^{k_8}_{k_5 k_6 k_7} \\
a_4 &= \epsilon_{k_4 k_8}
\end{aligned}
$$

Diagram 453:

$$
\begin{aligned}
\text{PO4.453} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{11}_{k_7 k_3} \Omega^{13}_{k_8 k_7 k_5 k_4} \Omega^{02}_{k_8 k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) \\
&= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{11}_{k_7 k_3} \Omega^{13}_{k_8 k_7 k_5 k_4} \Omega^{02}_{k_8 k_6} \left[\frac{1}{\epsilon_{k_1 k_2 k_4 k_7}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_4 k_5 k_7 k_6}\ \epsilon_{k_6 k_8}} + \frac{1}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_3 k_4 k_5 k_6}\ \epsilon_{k_4 k_5}} \right.
\end{aligned}
\tag{919}
$$

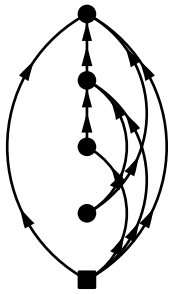
$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{920}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\
a_2 &= \epsilon^{k_7}_{k_3} \\
a_3 &= \epsilon^{k_8}_{k_4 k_5 k_7} \\
a_4 &= \epsilon_{k_6 k_8}
\end{aligned}
$$

Diagram 454:

$$
\begin{aligned}
\text{PO4.454} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{11}_{k_7 k_1} \Omega^{13}_{k_8 k_7 k_5 k_2} \Omega^{04}_{k_8 k_6 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) \\
&= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{11}_{k_7 k_1} \Omega^{13}_{k_8 k_7 k_5 k_2} \Omega^{04}_{k_8 k_6 k_3 k_4} \left[\frac{1}{\epsilon_{k_2 k_7 k_3 k_4}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_2 k_5 k_7 k_3 k_4 k_6}\ \epsilon_{k_3 k_4 k_6 k_8}} + \frac{}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_2 k_3}} \right.
\end{aligned} \tag{921}
$$



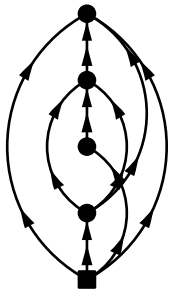
$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{922}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6} \\
a_2 &= \epsilon^{k_7}_{k_1} \\
a_3 &= \epsilon^{k_8}_{k_2 k_5 k_7} \\
a_4 &= \epsilon_{k_3 k_4 k_6 k_8}
\end{aligned}
$$

Diagram 455:

$$
\begin{aligned}
\text{PO4.455} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{11}_{k_8 k_2} \Omega^{13}_{k_9 k_8 k_5 k_6} \Omega^{04}_{k_9 k_7 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\
&= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{11}_{k_8 k_2} \Omega^{13}_{k_9 k_8 k_5 k_6} \Omega^{04}_{k_9 k_7 k_3 k_4} \left[\frac{1}{\epsilon_{k_1 k_8 k_3 k_4}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_6 k_8 k_3 k_4 k_7}\ \epsilon_{k_3 k_4 k_7 k_9}} + \frac{}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k} } \right.
\end{aligned} \tag{923}
$$



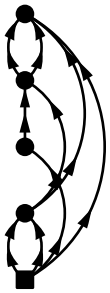
$\rightarrow$ T13:

$$
\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{924}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\
a_2 &= \epsilon^{k_8}_{k_2} \\
a_3 &= \epsilon^{k_9}_{k_5 k_6 k_8} \\
a_4 &= \epsilon_{k_3 k_4 k_7 k_9}
\end{aligned}
$$

Diagram 456:

$$
\begin{aligned}
\mathrm{PO4.456} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{11}_{k_7 k_3} \Omega^{22}_{k_8 k_9 k_7 k_5} \Omega^{04}_{k_8 k_9 k_6 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau \\
&= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{11}_{k_7 k_3} \Omega^{22}_{k_8 k_9 k_7 k_5} \Omega^{04}_{k_8 k_9 k_6 k_4} \left[\frac{1}{\epsilon_{k_1 k_2 k_7 k_4}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_7 k_4 k_6}\ \epsilon_{k_4 k_6 k_8 k_9}} + \frac{}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_3 k_5 k_4 k}} \right.
\end{aligned}
\tag{925}
$$



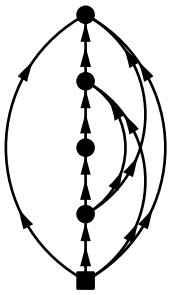
$\rightarrow$ T13:

$$
\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4}
\tag{926}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\
a_2 &= \epsilon^{k_7}_{k_3} \\
a_3 &= \epsilon^{k_8 k_9}_{k_5 k_7} \\
a_4 &= \epsilon_{k_4 k_6 k_8 k_9}
\end{aligned}
$$

Diagram 457:

$$
\begin{aligned}
\mathrm{PO4.457} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{11}_{k_8 k_5} \Omega^{13}_{k_9 k_8 k_6 k_2} \Omega^{04}_{k_9 k_7 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3- \\
&= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{11}_{k_8 k_5} \Omega^{13}_{k_9 k_8 k_6 k_2} \Omega^{04}_{k_9 k_7 k_3 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_2 k_6 k_3 k_4 k_7}\ \epsilon_{k_2 k_6 k_8 k_3 k_4 k_7}\ \epsilon_{k_3 k_4 k_7 k_9}}
\end{aligned}
\tag{927}
$$



$\rightarrow$ T6:

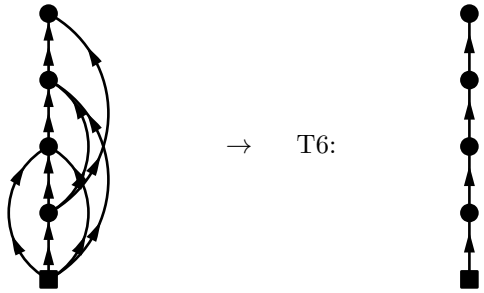
$$
\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4}
\tag{928}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\
a_2 &= \epsilon^{k_8}_{k_5} \\
a_3 &= \epsilon^{k_9}_{k_2 k_6 k_8} \\
a_4 &= \epsilon_{k_3 k_4 k_7 k_9}
\end{aligned}
$$

Diagram 458:

$$\text{PO4.458} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_2k_3}\Omega^{13}_{k_9k_8k_6k_4}\Omega^{02}_{k_9k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_2k_3}\Omega^{13}_{k_9k_8k_6k_4}\Omega^{02}_{k_9k_7}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_4k_6k_7}\ \epsilon_{k_4k_6k_8k_7}\ \epsilon_{k_7k_9}} \tag{929}$$



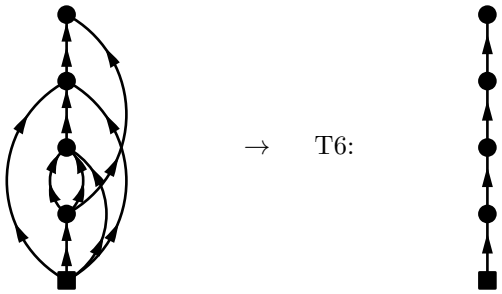
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{930}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon^{k_8}_{k_2k_3k_5}$$
$$a_3 = \epsilon^{k_9}_{k_4k_6k_8}$$
$$a_4 = \epsilon_{k_7k_9}$$

Diagram 459:

$$\text{PO4.459} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_6k_2}\Omega^{13}_{k_9k_8k_3k_4}\Omega^{02}_{k_9k_7}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{13}_{k_8k_5k_6k_2}\Omega^{13}_{k_9k_8k_3k_4}\Omega^{02}_{k_9k_7}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5k_6k_3k_4k_7}\ \epsilon_{k_3k_4k_8k_7}\ \epsilon_{k_7k_9}} \tag{931}$$



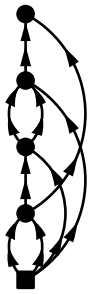
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{932}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon^{k_8}_{k_2k_5k_6}$$
$$a_3 = \epsilon^{k_9}_{k_3k_4k_8}$$
$$a_4 = \epsilon_{k_7k_9}$$

Diagram 460:

$$\text{PO4.460} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{22}_{k_7k_8k_5k_3}\Omega^{13}_{k_9k_7k_8k_4}\Omega^{02}_{k_9k_6}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{22}_{k_7k_8k_5k_3}\Omega^{13}_{k_9k_7k_8k_4}\Omega^{02}_{k_9k_6}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5k_4k_6}\ \epsilon_{k_4k_7k_8k_6}\ \epsilon_{k_6k_9}} \tag{933}$$



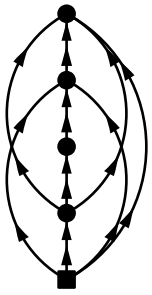
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{934}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7 k_8}_{k_3 k_5} \\ a_3 &= \epsilon^{k_9}_{k_4 k_7 k_8} \\ a_4 &= \epsilon_{k_6 k_9} \end{aligned}$$

Diagram 461:

$$\begin{aligned} \mathrm{PO4.461} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{11}_{k_8 k_5} \Omega^{13}_{k_9 k_8 k_2 k_3} \Omega^{04}_{k_9 k_6 k_7 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{11}_{k_8 k_5} \Omega^{13}_{k_9 k_8 k_2 k_3} \Omega^{04}_{k_9 k_6 k_7 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_2 k_3 k_4 k_6 k_7}\ \epsilon_{k_2 k_3 k_8 k_4 k_6 k_7}\ \epsilon_{k_4 k_6 k_7 k_9}} \end{aligned} \tag{935}$$



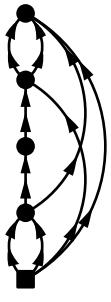
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{936}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\ a_2 &= \epsilon^{k_8}_{k_5} \\ a_3 &= \epsilon^{k_9}_{k_2 k_3 k_8} \\ a_4 &= \epsilon_{k_4 k_6 k_7 k_9} \end{aligned}$$

Diagram 462:

$$\begin{aligned} \mathrm{PO4.462} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{11}_{k_7 k_5} \Omega^{22}_{k_8 k_9 k_7 k_3} \Omega^{04}_{k_8 k_9 k_6 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{11}_{k_7 k_5} \Omega^{22}_{k_8 k_9 k_7 k_3} \Omega^{04}_{k_8 k_9 k_6 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_3 k_4 k_6}\ \epsilon_{k_3 k_7 k_4 k_6}\ \epsilon_{k_4 k_6 k_8 k_9}} \end{aligned} \tag{937}$$



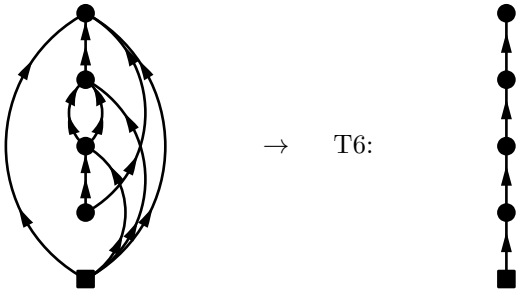
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{938}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7}_{k_5} \\ a_3 &= \epsilon^{k_8 k_9}_{k_3 k_7} \\ a_4 &= \epsilon_{k_4 k_6 k_8 k_9} \end{aligned}$$

Diagram 463:

$$\begin{aligned} \mathrm{PO4.463} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{22}_{k_7 k_8 k_5 k_1} \Omega^{13}_{k_9 k_7 k_8 k_2} \Omega^{04}_{k_9 k_6 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{22}_{k_7 k_8 k_5 k_1} \Omega^{13}_{k_9 k_7 k_8 k_2} \Omega^{04}_{k_9 k_6 k_3 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_5 k_2 k_3 k_4 k_6}\ \epsilon_{k_2 k_7 k_8 k_3 k_4 k_6}\ \epsilon_{k_3 k_4 k_6 k_9}} \end{aligned} \tag{939}$$



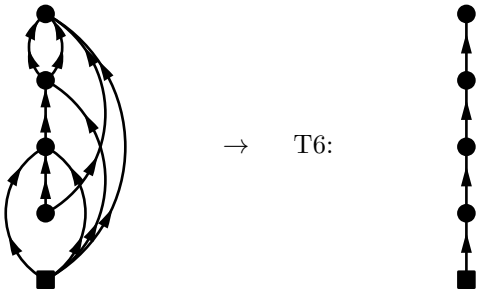
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{940}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6} \\ a_2 &= \epsilon^{k_7 k_8}_{k_1 k_5} \\ a_3 &= \epsilon^{k_9}_{k_2 k_7 k_8} \\ a_4 &= \epsilon_{k_3 k_4 k_6 k_9} \end{aligned}$$

Diagram 464:

$$\begin{aligned} \mathrm{PO4.464} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_5 k_1 k_2} \Omega^{22}_{k_8 k_9 k_7 k_3} \Omega^{04}_{k_8 k_9 k_6 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_5 k_1 k_2} \Omega^{22}_{k_8 k_9 k_7 k_3} \Omega^{04}_{k_8 k_9 k_6 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_2 k_5 k_3 k_4 k_6}\ \epsilon_{k_3 k_7 k_4 k_6}\ \epsilon_{k_4 k_6 k_8 k_9}} \end{aligned} \tag{941}$$



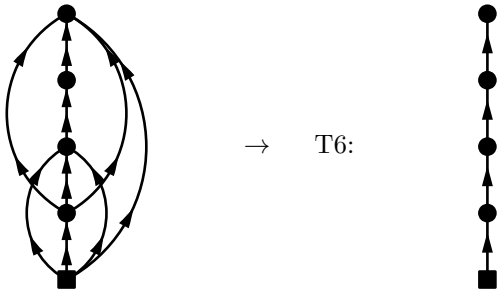
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{942}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6} \\
a_2 &= \epsilon^{k_7}_{k_1 k_2 k_5} \\
a_3 &= \epsilon^{k_8 k_9}_{k_3 k_7} \\
a_4 &= \epsilon_{k_4 k_6 k_8 k_9}
\end{aligned}
$$

Diagram 465:

$$
\begin{aligned}
\mathrm{PO4.465} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_2 k_3} \Omega^{11}_{k_9 k_8} \Omega^{04}_{k_9 k_6 k_7 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau \\
&= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_2 k_3} \Omega^{11}_{k_9 k_8} \Omega^{04}_{k_9 k_6 k_7 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_2 k_3 k_5 k_4 k_6 k_7}\ \epsilon_{k_8 k_4 k_6 k_7}\ \epsilon_{k_4 k_6 k_7 k_9}}
\end{aligned} \tag{943}
$$

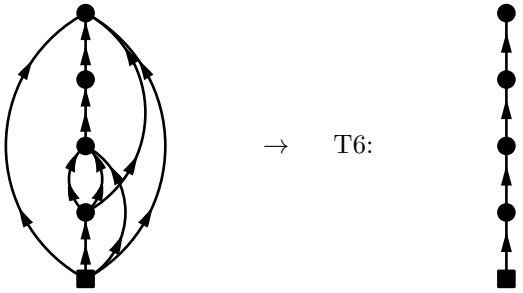


$$
\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{944}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\
a_2 &= \epsilon^{k_8}_{k_2 k_3 k_5} \\
a_3 &= \epsilon^{k_9}_{k_8} \\
a_4 &= \epsilon_{k_4 k_6 k_7 k_9}
\end{aligned}
$$

Diagram 466:

$$
\begin{aligned}
\mathrm{PO4.466} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_6 k_2} \Omega^{11}_{k_9 k_8} \Omega^{04}_{k_9 k_7 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4- \\
&= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{13}_{k_8 k_5 k_6 k_2} \Omega^{11}_{k_9 k_8} \Omega^{04}_{k_9 k_7 k_3 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_2 k_5 k_6 k_3 k_4 k_7}\ \epsilon_{k_8 k_3 k_4 k_7}\ \epsilon_{k_3 k_4 k_7 k_9}}
\end{aligned} \tag{945}
$$



$$
\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{946}
$$

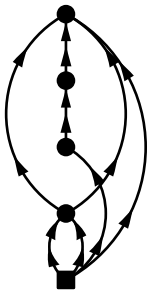
$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6 k_7}_{k_1} \\
a_2 &= \epsilon^{k_8}_{k_2 k_5 k_6} \\
a_3 &= \epsilon^{k_9}_{k_8} \\
a_4 &= \epsilon_{k_3 k_4 k_7 k_9}
\end{aligned}
$$

Diagram 467:

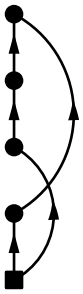
$$\text{PO4.467} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_3} \Omega^{11}_{k_8k_7} \Omega^{04}_{k_8k_5k_6k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k_6}_{k_1k_2}} e^{-}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_3} \Omega^{11}_{k_8k_7} \Omega^{04}_{k_8k_5k_6k_4} \left[\frac{1}{\epsilon_{k_1k_2k_4k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_7k_4}\ \epsilon_{k_4k_5k_6k_8}} + \frac{1}{\epsilon_{k_1k_2k_7k_4}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k} \right.$$

(947)



$\rightarrow$ T12:



$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \quad (948)$$

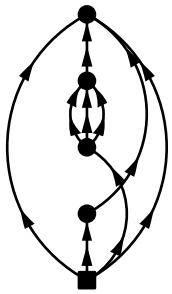
$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7}_{k_3}$$
$$a_3 = \epsilon^{k_8}_{k_7}$$
$$a_4 = \epsilon_{k_4k_5k_6k_8}$$

Diagram 468:

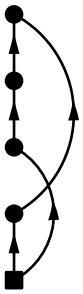
$$\text{PO4.468} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{31}_{k_6k_7k_8k_2} \Omega^{13}_{k_9k_6k_7k_8} \Omega^{04}_{k_9k_5k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k}_{k}}$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{31}_{k_6k_7k_8k_2} \Omega^{13}_{k_9k_6k_7k_8} \Omega^{04}_{k_9k_5k_3k_4} \left[\frac{1}{\epsilon_{k_1k_3k_4k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_6k_7k_8k_3k_4}\ \epsilon_{k_3k_4k_5k_9}} + \frac{}{\epsilon_{k_1k_6k_7k_8k_3k} \right.$$

(949)



$\rightarrow$ T12:



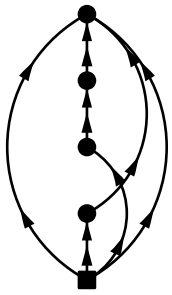
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \quad (950)$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7k_8}_{k_2}$$
$$a_3 = \epsilon^{k_9}_{k_6k_7k_8}$$
$$a_4 = \epsilon_{k_3k_4k_5k_9}$$

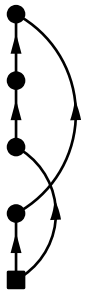
Diagram 469:

$$\text{PO4.469} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{11}_{k_6k_2}\Omega^{11}_{k_7k_6}\Omega^{04}_{k_7k_5k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1}}e^{-\tau_2\epsilon^{k_6}_{k_2}}$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{11}_{k_6k_2}\Omega^{11}_{k_7k_6}\Omega^{04}_{k_7k_5k_3k_4}\left[\frac{1}{\epsilon_{k_1k_3k_4k_7}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_6k_3k_4}\ \epsilon_{k_3k_4k_5k_7}} + \frac{1}{\epsilon_{k_1k_6k_3k_4}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_6k_5}}\right. \tag{951}$$



$\rightarrow$ T12:



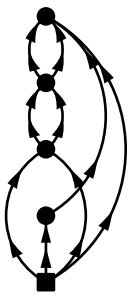
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{952}$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6}_{k_2}$$
$$a_3 = \epsilon^{k_7}_{k_6}$$
$$a_4 = \epsilon_{k_3k_4k_5k_7}$$

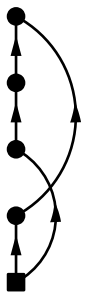
Diagram 470:

$$\text{PO4.470} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{22}_{k_6k_7k_2k_3}\Omega^{22}_{k_8k_9k_6k_7}\Omega^{04}_{k_8k_9k_5k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1}}\epsilon$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{22}_{k_6k_7k_2k_3}\Omega^{22}_{k_8k_9k_6k_7}\Omega^{04}_{k_8k_9k_5k_4}\left[\frac{1}{\epsilon_{k_1k_4k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_6k_7k_4}\ \epsilon_{k_4k_5k_8k_9}} + \frac{}{\epsilon_{k_1k_6k_7k_4}\ \epsilon_{k_1k_2k_3k}}\right. \tag{953}$$



$\rightarrow$ T12:



$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{954}$$

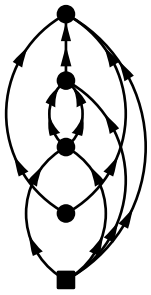
$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7}_{k_2k_3}$$
$$a_3 = \epsilon^{k_8k_9}_{k_6k_7}$$
$$a_4 = \epsilon_{k_4k_5k_8k_9}$$

Diagram 471:

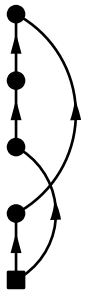
$$\text{PO4.471} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_1k_2} \Omega^{13}_{k_9k_7k_8k_3} \Omega^{04}_{k_9k_5k_6k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_1k_2} \Omega^{13}_{k_9k_7k_8k_3} \Omega^{04}_{k_9k_5k_6k_4} \left[\frac{1}{\epsilon_{k_4k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_7k_8k_4}\ \epsilon_{k_4k_5k_6k_9}} + \frac{1}{\epsilon_{k_3k_7k_8k_4}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k} \right.$$

(955)



$\rightarrow$ T12:



$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2}$$

(956)

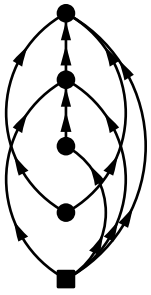
$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_1k_2}$$
$$a_3 = \epsilon^{k_9}_{k_3k_7k_8}$$
$$a_4 = \epsilon_{k_4k_5k_6k_9}$$

Diagram 472:

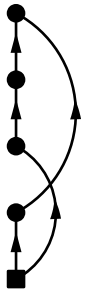
$$\text{PO4.472} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{11}_{k_7k_1} \Omega^{13}_{k_8k_7k_2k_3} \Omega^{04}_{k_8k_5k_6k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k_6}} e^{-}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{11}_{k_7k_1} \Omega^{13}_{k_8k_7k_2k_3} \Omega^{04}_{k_8k_5k_6k_4} \left[\frac{1}{\epsilon_{k_4k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_7k_4}\ \epsilon_{k_4k_5k_6k_8}} + \frac{1}{\epsilon_{k_2k_3k_7k_4}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k} \right.$$

(957)



$\rightarrow$ T12:



$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2}$$

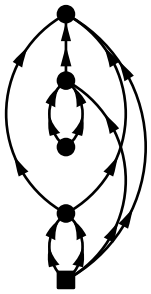
(958)

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1}$$
$$a_3 = \epsilon^{k_8}_{k_2k_3k_7}$$
$$a_4 = \epsilon_{k_4k_5k_6k_8}$$

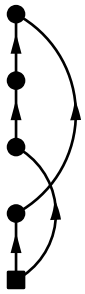
Diagram 473:

$$\text{PO4.473} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{20}_{k_7k_8} \Omega^{13}_{k_9k_7k_8k_3} \Omega^{04}_{k_9k_5k_6k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k}_{k_1 k}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{20}_{k_7k_8} \Omega^{13}_{k_9k_7k_8k_3} \Omega^{04}_{k_9k_5k_6k_4} \left[\frac{1}{\epsilon_{k_1k_2k_4k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_7k_8k_4}\ \epsilon_{k_4k_5k_6k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_7k_8k_4}} \right. \tag{959}$$



$\rightarrow$ T12:



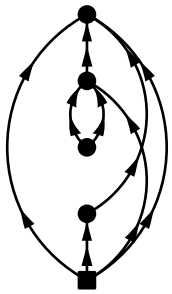
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{960}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7k_8}$$
$$a_3 = \epsilon^{k_9}_{k_3k_7k_8}$$
$$a_4 = \epsilon_{k_4k_5k_6k_9}$$

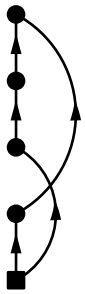
Diagram 474:

$$\text{PO4.474} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{20}_{k_6k_7} \Omega^{13}_{k_8k_6k_7k_2} \Omega^{04}_{k_8k_5k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1}} e^{-}$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{20}_{k_6k_7} \Omega^{13}_{k_8k_6k_7k_2} \Omega^{04}_{k_8k_5k_3k_4} \left[\frac{1}{\epsilon_{k_1k_3k_4k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_6k_7k_3k_4}\ \epsilon_{k_3k_4k_5k_8}} + \frac{}{\epsilon_{k_1k_2k_6k_7k_3k_4}\ \epsilon_{k}} \right. \tag{961}$$



$\rightarrow$ T12:



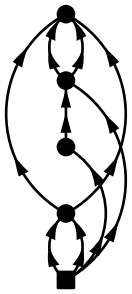
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{962}$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7}$$
$$a_3 = \epsilon^{k_8}_{k_2k_6k_7}$$
$$a_4 = \epsilon_{k_3k_4k_5k_8}$$

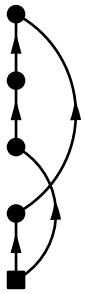
Diagram 475:

$$\text{PO4.475} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_3} \Omega^{22}_{k_8k_9k_7k_4} \Omega^{04}_{k_8k_9k_5k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k}_{k_1 k}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_3} \Omega^{22}_{k_8k_9k_7k_4} \Omega^{04}_{k_8k_9k_5k_6} \left[\frac{1}{\epsilon_{k_1k_2k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_4k_7}\ \epsilon_{k_5k_6k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_4k_7}\ \epsilon_{k_1k_2k_3k} \right. \tag{963}$$



$\rightarrow$ T12:



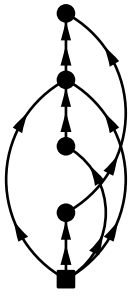
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{964}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7}_{k_3}$$
$$a_3 = \epsilon^{k_8k_9}_{k_4k_7}$$
$$a_4 = \epsilon_{k_5k_6k_8k_9}$$

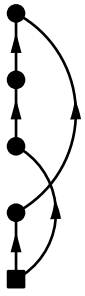
Diagram 476:

$$\text{PO4.476} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{11}_{k_6k_2} \Omega^{13}_{k_7k_6k_3k_4} \Omega^{02}_{k_7k_5} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1}} e^{-\tau_2 \epsilon^{k_6}_{k_2}}$$

$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{11}_{k_6k_2} \Omega^{13}_{k_7k_6k_3k_4} \Omega^{02}_{k_7k_5} \left[\frac{1}{\epsilon_{k_1k_7}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_3k_4k_6}\ \epsilon_{k_5k_7}} + \frac{1}{\epsilon_{k_1k_3k_4k_6}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_4k_6k_5}\ \epsilon_{k_5}} \right. \tag{965}$$



$\rightarrow$ T12:



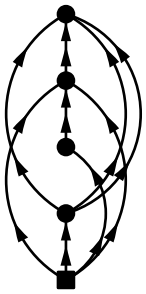
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{966}$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6}_{k_2}$$
$$a_3 = \epsilon^{k_7}_{k_3k_4k_6}$$
$$a_4 = \epsilon_{k_5k_7}$$

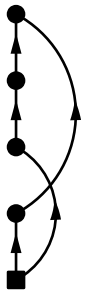
Diagram 477:

$$\text{PO4.477} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{11}_{k_8k_2}\Omega^{13}_{k_9k_8k_3k_4}\Omega^{04}_{k_9k_5k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k}_{k}}$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{11}_{k_8k_2}\Omega^{13}_{k_9k_8k_3k_4}\Omega^{04}_{k_9k_5k_6k_7} \left[\frac{1}{\epsilon_{k_1k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_3k_4k_8}\ \epsilon_{k_5k_6k_7k_9}} + \frac{}{\epsilon_{k_1k_3k_4k_8}\ \epsilon_{k_1k_2k_3k_4}\ } \right. \tag{967}$$



$\rightarrow$ T12:



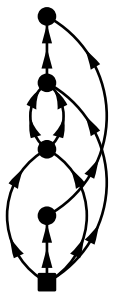
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{968}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon^{k_8}_{k_2}$$
$$a_3 = \epsilon^{k_9}_{k_3k_4k_8}$$
$$a_4 = \epsilon_{k_5k_6k_7k_9}$$

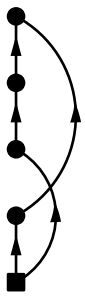
Diagram 478:

$$\text{PO4.478} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{22}_{k_6k_7k_2k_3}\Omega^{13}_{k_8k_6k_7k_4}\Omega^{02}_{k_8k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1}}e^{-}$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{22}_{k_6k_7k_2k_3}\Omega^{13}_{k_8k_6k_7k_4}\Omega^{02}_{k_8k_5} \left[\frac{1}{\epsilon_{k_1k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_4k_6k_7}\ \epsilon_{k_5k_8}} + \frac{1}{\epsilon_{k_1k_4k_6k_7}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_6k_7k_}} \right. \tag{969}$$



$\rightarrow$ T12:



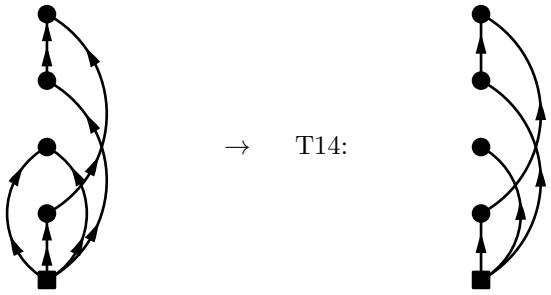
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{970}$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon^{k_6k_7}_{k_2k_3}$$
$$a_3 = \epsilon^{k_8}_{k_4k_6k_7}$$
$$a_4 = \epsilon_{k_5k_8}$$

Diagram 479:

$$\text{PO4.479} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{02}_{k_2k_3}\Omega^{11}_{k_6k_4}\Omega^{02}_{k_6k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1}}e^{-\tau_2\epsilon_{k_2k_3}}e^{-\tau_3\epsilon^{k_6}_{k_4}}e^{-\tau_4}$$

$$= \frac{-(-1)^4}{2(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{02}_{k_2k_3}\Omega^{11}_{k_6k_4}\Omega^{02}_{k_6k_5} \left[\frac{1}{\epsilon_{k_1k_4}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_5}\ \epsilon_{k_5k_6}} + \frac{1}{\epsilon_{k_1k_6}\ \epsilon_{k_2k_3}\ \epsilon_{k_1k_4}\ \epsilon_{k_5k_6}}\right] \tag{971}$$



$$\text{T14} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} + \frac{1}{(a_1+a_4)a_2(a_3+a_1+a_4)a_4} \tag{972}$$

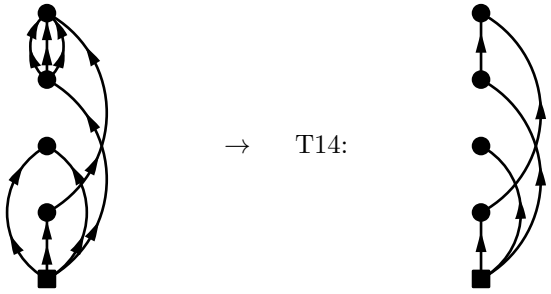
$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3}$$
$$a_3 = \epsilon^{k_6}_{k_4}$$
$$a_4 = \epsilon_{k_5k_6}$$

Diagram 480:

$$\text{PO4.480} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{02}_{k_2k_3}\Omega^{31}_{k_6k_7k_8k_4}\Omega^{04}_{k_6k_7k_8k_5} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1}}e^{-\tau_2\epsilon_{k_2k_3}}e^{-\tau_3}$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{02}_{k_2k_3}\Omega^{31}_{k_6k_7k_8k_4}\Omega^{04}_{k_6k_7k_8k_5} \left[\frac{1}{\epsilon_{k_1k_4}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_5}\ \epsilon_{k_5k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_6k_7k_8}\ \epsilon_{k_2k_3}\ \epsilon_{k_1k_4}\ \epsilon_{k_5k_6k_7k_8}}\right.$$

(973)



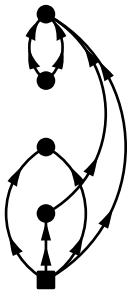
$$\text{T14} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} + \frac{1}{(a_1+a_4)a_2(a_3+a_1+a_4)a_4} \tag{974}$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3}$$
$$a_3 = \epsilon^{k_6k_7k_8}_{k_4}$$
$$a_4 = \epsilon_{k_5k_6k_7k_8}$$

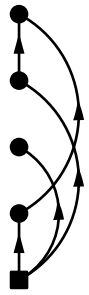
Diagram 481:

$$\mathrm{PO4.481} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{02}_{k_2k_3} \Omega^{20}_{k_6k_7} \Omega^{04}_{k_6k_7k_5k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}_{k_1}} e^{-\tau_2 \epsilon_{k_2k_3}} e^{-\tau_3 \epsilon^{k_6k_7}}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{02}_{k_2k_3} \Omega^{20}_{k_6k_7} \Omega^{04}_{k_6k_7k_5k_4} \left[\frac{1}{\epsilon_{k_1k_4}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_5}\ \epsilon_{k_4k_5k_6k_7}} + \frac{1}{\epsilon_{k_1k_4k_6k_7}\ \epsilon_{k_2k_3}\ \epsilon_{k_1k_4}\ \epsilon_{k_4k_5k_6k_7}} \right] \tag{975}$$



$\rightarrow$ T14:



$$\mathrm{T14} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} + \frac{1}{(a_1+a_4)a_2(a_3+a_1+a_4)a_4} \tag{976}$$

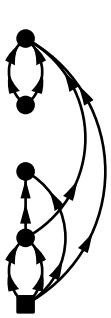
$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3}$$
$$a_3 = \epsilon^{k_6k_7}$$
$$a_4 = \epsilon_{k_4k_5k_6k_7}$$

Diagram 482:

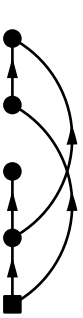
$$\mathrm{PO4.482} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{02}_{k_5k_3} \Omega^{20}_{k_7k_8} \Omega^{04}_{k_7k_8k_6k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5k_6}_{k_1k_2}} \epsilon$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{02}_{k_5k_3} \Omega^{20}_{k_7k_8} \Omega^{04}_{k_7k_8k_6k_4} \left[\frac{1}{\epsilon_{k_1k_2k_3k_4k_7k_8}\ \epsilon_{k_3k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5}\ \epsilon_{k_4k_6}} \right.$$

(977)



$\rightarrow$ T9:



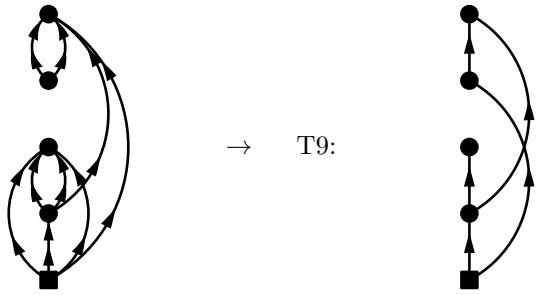
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{978}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon_{k_3k_5}$$
$$a_3 = \epsilon^{k_7k_8}$$
$$a_4 = \epsilon_{k_4k_6k_7k_8}$$

Diagram 483:

$$\mathrm{PO4.483} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{04}_{k_5k_6k_2k_3} \Omega^{20}_{k_8k_9} \Omega^{04}_{k_8k_9k_7k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k}_{k_1}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{04}_{k_5k_6k_2k_3} \Omega^{20}_{k_8k_9} \Omega^{04}_{k_8k_9k_7k_4} \left[\frac{1}{\epsilon_{k_1k_2k_3k_4k_8k_9}\ \epsilon_{k_2k_3k_5k_6}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k}} \right. \tag{979}$$



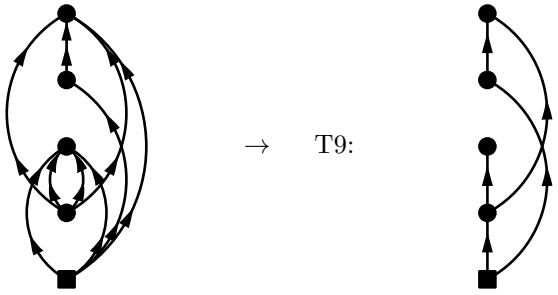
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{980}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3k_5k_6}$$
$$a_3 = \epsilon^{k_8k_9}$$
$$a_4 = \epsilon_{k_4k_7k_8k_9}$$

Diagram 484:

$$\mathrm{PO4.484} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{11}_{k_9k_3} \Omega^{04}_{k_9k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{11}_{k_9k_3} \Omega^{04}_{k_9k_7k_8k_4} \left[\frac{1}{\epsilon_{k_1k_2k_4k_9}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_7k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k}} \right. \tag{981}$$



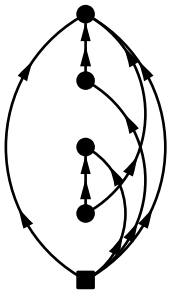
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{982}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_2k_5k_6}$$
$$a_3 = \epsilon^{k_9}_{k_3}$$
$$a_4 = \epsilon_{k_4k_7k_8k_9}$$

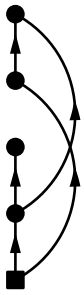
Diagram 485:

$$\mathrm{PO4.485} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{02}_{k_5k_1} \Omega^{11}_{k_7k_2} \Omega^{04}_{k_7k_6k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5k_6}} e^{-\tau_2 \epsilon_{k_1}}$$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{02}_{k_5k_1} \Omega^{11}_{k_7k_2} \Omega^{04}_{k_7k_6k_3k_4} \left[\frac{1}{\epsilon_{k_1k_3k_4k_7}\ \epsilon_{k_1k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_4k_6k_7}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5}\ \epsilon_{k_2k_3k_4k_6}\ \epsilon_{k_3k_} \right. \tag{983}$$



$\rightarrow$ T9:



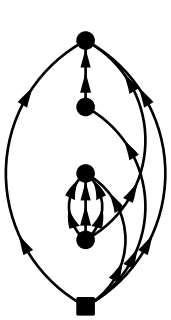
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{984}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_5}$$
$$a_3 = \epsilon^{k_7}_{k_2}$$
$$a_4 = \epsilon_{k_3k_4k_6k_7}$$

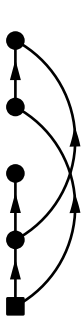
Diagram 486:

$$\mathrm{PO4.486} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_7k_1} \Omega^{11}_{k_9k_2} \Omega^{04}_{k_9k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5}}$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_7k_1} \Omega^{11}_{k_9k_2} \Omega^{04}_{k_9k_8k_3k_4} \left[\frac{1}{\epsilon_{k_1k_3k_4k_9}\ \epsilon_{k_1k_5k_6k_7}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_4k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6} \right. \tag{985}$$



$\rightarrow$ T9:



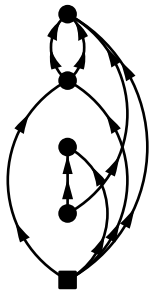
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{986}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_5k_6k_7}$$
$$a_3 = \epsilon^{k_9}_{k_2}$$
$$a_4 = \epsilon_{k_3k_4k_8k_9}$$

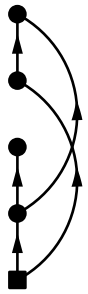
Diagram 487:

$$\text{PO4.487} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{02}_{k_5k_1} \Omega^{22}_{k_7k_8k_2k_3} \Omega^{04}_{k_7k_8k_6k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k_6}} \epsilon$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{02}_{k_5k_1} \Omega^{22}_{k_7k_8k_2k_3} \Omega^{04}_{k_7k_8k_6k_4} \left[\frac{1}{\epsilon_{k_1k_4k_7k_8}\ \epsilon_{k_1k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_6k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5}\ \epsilon_{k_2k_3k_4k_6}} \right. \tag{987}$$



$\rightarrow$ T9:



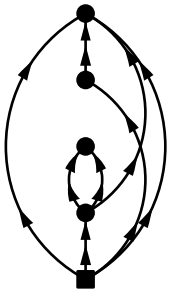
$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{988}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_5}$$
$$a_3 = \epsilon^{k_7k_8}_{k_2k_3}$$
$$a_4 = \epsilon_{k_4k_6k_7k_8}$$

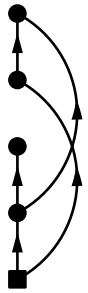
Diagram 488:

$$\text{PO4.488} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_6} \Omega^{11}_{k_8k_2} \Omega^{04}_{k_8k_7k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k_6k}_{k_1}}$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_6} \Omega^{11}_{k_8k_2} \Omega^{04}_{k_8k_7k_3k_4} \left[\frac{1}{\epsilon_{k_1k_3k_4k_8}\ \epsilon_{k_5k_6}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_4k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_2k_3k_4k}} \right. \tag{989}$$



$\rightarrow$ T9:



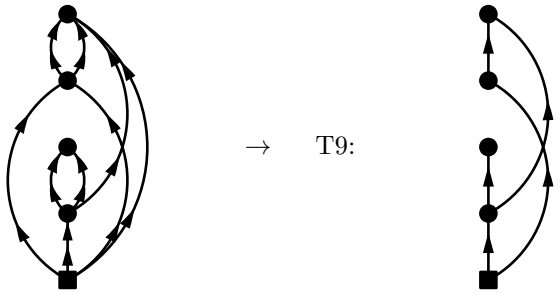
$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{990}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_5k_6}$$
$$a_3 = \epsilon^{k_8}_{k_2}$$
$$a_4 = \epsilon_{k_3k_4k_7k_8}$$

Diagram 489:

$$\mathrm{PO4.489} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_6} \Omega^{22}_{k_8k_9k_2k_3} \Omega^{04}_{k_8k_9k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k}_{k_1}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_6} \Omega^{22}_{k_8k_9k_2k_3} \Omega^{04}_{k_8k_9k_7k_4} \left[\frac{1}{\epsilon_{k_1k_4k_8k_9}\ \epsilon_{k_5k_6}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_4k_7k_8k_9}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_2k_3k}} \right. \tag{991}$$



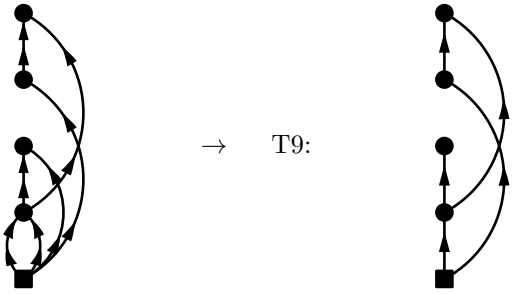
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{992}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_5k_6}$$
$$a_3 = \epsilon^{k_8k_9}_{k_2k_3}$$
$$a_4 = \epsilon_{k_4k_7k_8k_9}$$

Diagram 490:

$$\mathrm{PO4.490} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{02}_{k_5k_3} \Omega^{11}_{k_7k_4} \Omega^{02}_{k_7k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k_6}_{k_1k_2}} e^{-\tau_2\epsilon_{k_3}}$$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{02}_{k_5k_3} \Omega^{11}_{k_7k_4} \Omega^{02}_{k_7k_6} \left[\frac{1}{\epsilon_{k_1k_2k_3k_7}\ \epsilon_{k_3k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_6k_7}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5}\ \epsilon_{k_4k_6}\ \epsilon_{k_6k_7}} \right] \tag{993}$$



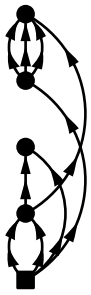
$$\mathrm{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{994}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon_{k_3k_5}$$
$$a_3 = \epsilon^{k_7}_{k_4}$$
$$a_4 = \epsilon_{k_6k_7}$$

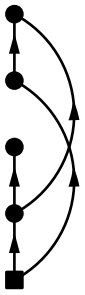
Diagram 491:

$$\text{PO4.491} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{02}_{k_5k_3}\Omega^{31}_{k_7k_8k_9k_4}\Omega^{04}_{k_7k_8k_9k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon_{k_1}^{k_1}}$$

$$= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{02}_{k_5k_3}\Omega^{31}_{k_7k_8k_9k_4}\Omega^{04}_{k_7k_8k_9k_6} \left[\frac{1}{\epsilon_{k_1k_2k_3k_7k_8k_9}\ \epsilon_{k_3k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_6k_7k_8k_9}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5}\ \epsilon} \right. \tag{995}$$



$\rightarrow$ T9:



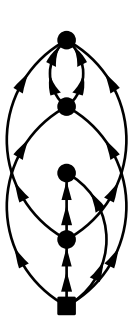
$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{996}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon_{k_3k_5}$$
$$a_3 = \epsilon^{k_7k_8k_9}_{k_4}$$
$$a_4 = \epsilon_{k_6k_7k_8k_9}$$

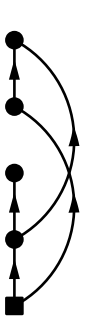
Diagram 492:

$$\text{PO4.492} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{02}_{k_5k_2}\Omega^{22}_{k_8k_9k_3k_4}\Omega^{04}_{k_8k_9k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon_{k_1}^{k_5k}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{02}_{k_5k_2}\Omega^{22}_{k_8k_9k_3k_4}\Omega^{04}_{k_8k_9k_6k_7} \left[\frac{1}{\epsilon_{k_1k_2k_8k_9}\ \epsilon_{k_2k_5}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_6k_7k_8k_9}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_3k_4k_i}} \right. \tag{997}$$



$\rightarrow$ T9:



$$\frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{998}$$

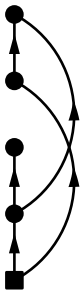
$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_5}$$
$$a_3 = \epsilon^{k_8k_9}_{k_3k_4}$$
$$a_4 = \epsilon_{k_6k_7k_8k_9}$$

Diagram 493:

$$\text{PO4.493} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_6k_2k_3}\Omega^{11}_{k_8k_4}\Omega^{02}_{k_8k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6k}_{k_1}}$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_6k_2k_3}\Omega^{11}_{k_8k_4}\Omega^{02}_{k_8k_7} \left[\frac{1}{\epsilon_{k_1k_2k_3k_8}\ \epsilon_{k_2k_3k_5k_6}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_6}\ \epsilon_{k_4k} \right. \tag{999}$$

$\rightarrow$ T9:



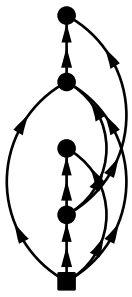
$$\text{T9} = \frac{1}{(a_1+a_2+a_4)a_2(a_3+a_1+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1000}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3k_5k_6}$$
$$a_3 = \epsilon^{k_8}_{k_4}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 494:

$$\text{PO4.494} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{02}_{k_5k_2}\Omega^{13}_{k_8k_6k_3k_4}\Omega^{02}_{k_8k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{\cdot}$$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{02}_{k_5k_2}\Omega^{13}_{k_8k_6k_3k_4}\Omega^{02}_{k_8k_7}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_3k_4k_6k_7}\ \epsilon_{k_7k_8}} \tag{1001}$$



$\rightarrow$ T5:

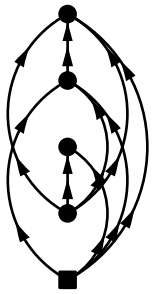
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1002}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_5}$$
$$a_3 = \epsilon^{k_8}_{k_3k_4k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 495:

$$\text{PO4.495} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{02}_{k_5k_1}\Omega^{13}_{k_9k_6k_2k_3}\Omega^{04}_{k_9k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{02}_{k_5k_1}\Omega^{13}_{k_9k_6k_2k_3}\Omega^{04}_{k_9k_7k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5}\ \epsilon_{k_2k_3k_6k_4k_7k_8}\ \epsilon_{k_4k_7k_8k_9}} \tag{1003}$$



→ T5:

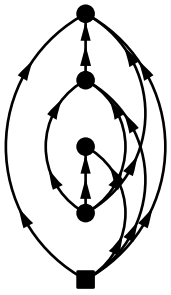
$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1004}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_5}$$
$$a_3 = \epsilon^{k_9}_{k_2k_3k_6}$$
$$a_4 = \epsilon_{k_4k_7k_8k_9}$$

Diagram 496:

$$\mathrm{PO4.496} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{02}_{k_5k_1} \Omega^{13}_{k_9k_6k_7k_2} \Omega^{04}_{k_9k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{02}_{k_5k_1} \Omega^{13}_{k_9k_6k_7k_2} \Omega^{04}_{k_9k_8k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5}\ \epsilon_{k_2k_6k_7k_3k_4k_8}\ \epsilon_{k_3k_4k_8k_9}} \tag{1005}$$



→ T5:

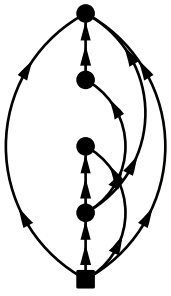
$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1006}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_5}$$
$$a_3 = \epsilon^{k_9}_{k_2k_6k_7}$$
$$a_4 = \epsilon_{k_3k_4k_8k_9}$$

Diagram 497:

$$\mathrm{PO4.497} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_2} \Omega^{11}_{k_8k_6} \Omega^{04}_{k_8k_7k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e$$

$$= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_2} \Omega^{11}_{k_8k_6} \Omega^{04}_{k_8k_7k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_6k_3k_4k_7}\ \epsilon_{k_3k_4k_7k_8}} \tag{1007}$$



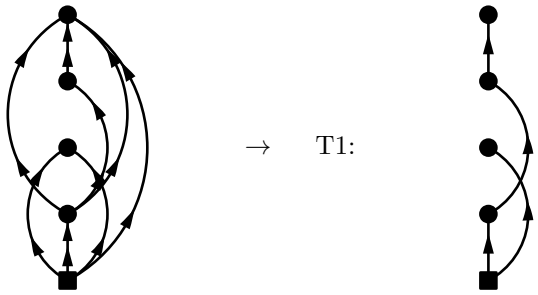
→ T5:

$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1008}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_5k_6k_7} \\ a_2 &= \epsilon_{k_2k_5} \\ a_3 &= \epsilon_{k_6}^{k_8} \\ a_4 &= \epsilon_{k_3k_4k_7k_8} \end{aligned}$$

Diagram 498:

$$\begin{aligned} \mathrm{PO4.498} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_2k_3} \Omega^{11}_{k_8k_5} \Omega^{04}_{k_8k_6k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon_{k_1}^{k_5k_6k_7}} \epsilon \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_2k_3} \Omega^{11}_{k_8k_5} \Omega^{04}_{k_8k_6k_7k_4}}{\epsilon_{k_1k_4}\ \epsilon_{k_2k_3}\ \epsilon_{k_5k_4k_6k_7}\ \epsilon_{k_4k_6k_7k_8}} \end{aligned} \tag{1009}$$

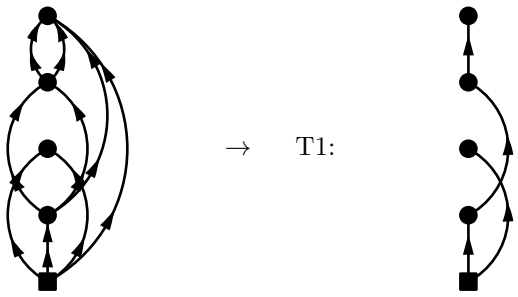


$$\mathrm{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1010}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_5k_6k_7} \\ a_2 &= \epsilon_{k_2k_3} \\ a_3 &= \epsilon_{k_5}^{k_8} \\ a_4 &= \epsilon_{k_4k_6k_7k_8} \end{aligned}$$

Diagram 499:

$$\begin{aligned} \mathrm{PO4.499} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_2k_3} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{04}_{k_8k_9k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon_{k_1}^{k_5k} \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_2k_3} \Omega^{22}_{k_8k_9k_5k_6} \Omega^{04}_{k_8k_9k_7k_4}}{\epsilon_{k_1k_4}\ \epsilon_{k_2k_3}\ \epsilon_{k_5k_6k_4k_7}\ \epsilon_{k_4k_7k_8k_9}} \end{aligned} \tag{1011}$$

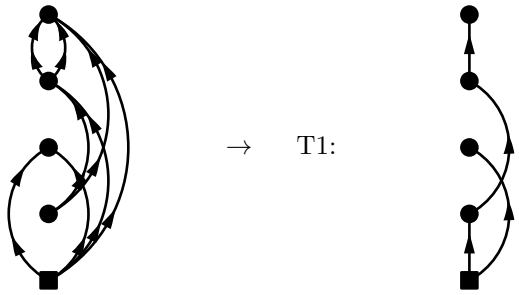


$$\mathrm{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1012}$$

$$a_1 = \epsilon^{k_5 k_6 k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2 k_3}$$
$$a_3 = \epsilon^{k_8 k_9}_{k_5 k_6}$$
$$a_4 = \epsilon_{k_4 k_7 k_8 k_9}$$

Diagram 500:

$$\text{PO4.500} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{02}_{k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_3} \Omega^{04}_{k_7 k_8 k_6 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3 - \tau_1)\theta(\tau_4 - \tau_1)\theta(\tau_4 - \tau_3) e^{-\tau_1 \epsilon^{k_5 k_6}} \epsilon$$
$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{02}_{k_1 k_2} \Omega^{22}_{k_7 k_8 k_5 k_3} \Omega^{04}_{k_7 k_8 k_6 k_4}}{\epsilon_{k_3 k_4}\ \epsilon_{k_1 k_2}\ \epsilon_{k_3 k_5 k_4 k_6}\ \epsilon_{k_4 k_6 k_7 k_8}} \tag{1013}$$

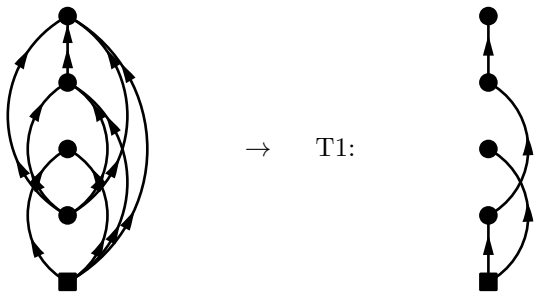


$$\text{T1} = \frac{1}{(a_1 + a_3 + a_4) a_2 (a_3 + a_4) a_4} \tag{1014}$$

$$a_1 = \epsilon^{k_5 k_6}$$
$$a_2 = \epsilon_{k_1 k_2}$$
$$a_3 = \epsilon^{k_7 k_8}_{k_3 k_5}$$
$$a_4 = \epsilon_{k_4 k_6 k_7 k_8}$$

Diagram 501:

$$\text{PO4.501} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{40}_{k_5 k_6 k_7 k_8} \Omega^{02}_{k_1 k_2} \Omega^{13}_{k_9 k_5 k_6 k_3} \Omega^{04}_{k_9 k_7 k_8 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3 - \tau_1)\theta(\tau_4 - \tau_1)\theta(\tau_4 - \tau_3) e^{-\tau_1 \epsilon^{k_5 k}}$$
$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{40}_{k_5 k_6 k_7 k_8} \Omega^{02}_{k_1 k_2} \Omega^{13}_{k_9 k_5 k_6 k_3} \Omega^{04}_{k_9 k_7 k_8 k_4}}{\epsilon_{k_3 k_4}\ \epsilon_{k_1 k_2}\ \epsilon_{k_3 k_5 k_6 k_4 k_7 k_8}\ \epsilon_{k_4 k_7 k_8 k_9}} \tag{1015}$$



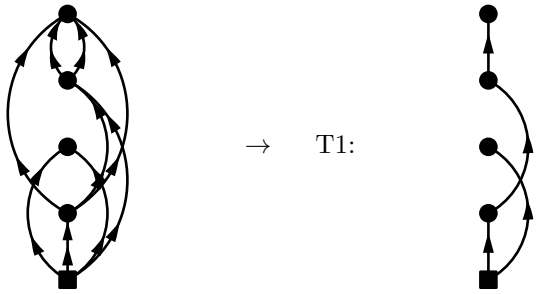
$$\text{T1} = \frac{1}{(a_1 + a_3 + a_4) a_2 (a_3 + a_4) a_4} \tag{1016}$$

$$a_1 = \epsilon^{k_5 k_6 k_7 k_8}$$
$$a_2 = \epsilon_{k_1 k_2}$$
$$a_3 = \epsilon^{k_9}_{k_3 k_5 k_6}$$
$$a_4 = \epsilon_{k_4 k_7 k_8 k_9}$$

Diagram 502:

$$\text{PO4.502} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_2k_3} \Omega^{22}_{k_8k_9k_5k_4} \Omega^{04}_{k_8k_9k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k}_{k_1}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_2k_3} \Omega^{22}_{k_8k_9k_5k_4} \Omega^{04}_{k_8k_9k_6k_7}}{\epsilon_{k_1k_4}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_5k_6k_7}\ \epsilon_{k_6k_7k_8k_9}} \tag{1017}$$



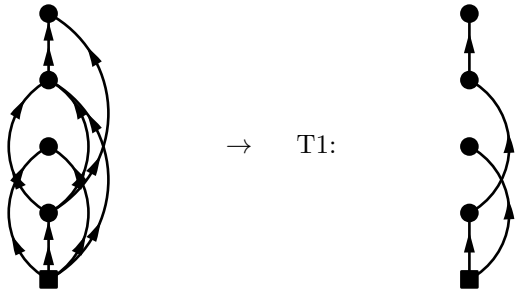
$$\text{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1018}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3}$$
$$a_3 = \epsilon^{k_8k_9}_{k_4k_5}$$
$$a_4 = \epsilon_{k_6k_7k_8k_9}$$

Diagram 503:

$$\text{PO4.503} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_2k_3} \Omega^{13}_{k_8k_5k_6k_4} \Omega^{02}_{k_8k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k_6k}_{k_1}}$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_2k_3} \Omega^{13}_{k_8k_5k_6k_4} \Omega^{02}_{k_8k_7}}{\epsilon_{k_1k_4}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_5k_6k_7}\ \epsilon_{k_7k_8}} \tag{1019}$$



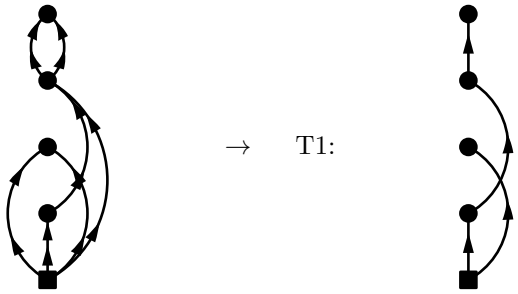
$$\text{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1020}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3}$$
$$a_3 = \epsilon^{k_8}_{k_4k_5k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 504:

$$\text{PO4.504} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{02}_{k_2k_3} \Omega^{22}_{k_6k_7k_5k_4} \Omega^{02}_{k_6k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5}_{k_1}} e^{-\tau_2\epsilon_{k_2k_3}} e^{-\tau_3\epsilon^{k_6k_7}_{k_4k_5}}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{02}_{k_2k_3} \Omega^{22}_{k_6k_7k_5k_4} \Omega^{02}_{k_6k_7}}{\epsilon_{k_1k_4}\ \epsilon_{k_2k_3}\ \epsilon_{k_4k_5}\ \epsilon_{k_6k_7}} \tag{1021}$$

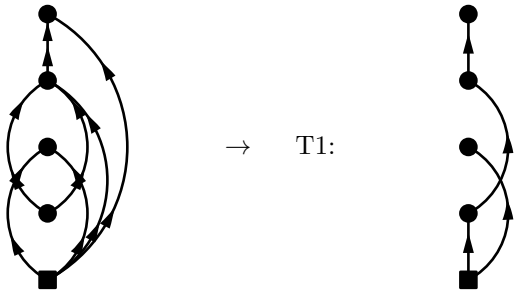


$$\text{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1022}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5}_{k_1} \\ a_2 &= \epsilon_{k_2 k_3} \\ a_3 &= \epsilon^{k_6 k_7}_{k_4 k_5} \\ a_4 &= \epsilon_{k_6 k_7} \end{aligned}$$

Diagram 505:

$$\begin{aligned} \text{PO4.505} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{02}_{k_1 k_2} \Omega^{13}_{k_7 k_5 k_6 k_3} \Omega^{02}_{k_7 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k_6}} e^{-\tau_2 \epsilon_{k_1 k_2}} e^{-\tau_3 \epsilon^{k_7}_{k_3 k} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{02}_{k_1 k_2} \Omega^{13}_{k_7 k_5 k_6 k_3} \Omega^{02}_{k_7 k_4}}{\epsilon_{k_3 k_4}\ \epsilon_{k_1 k_2}\ \epsilon_{k_3 k_5 k_6 k_4}\ \epsilon_{k_4 k_7}} \end{aligned} \tag{1023}$$

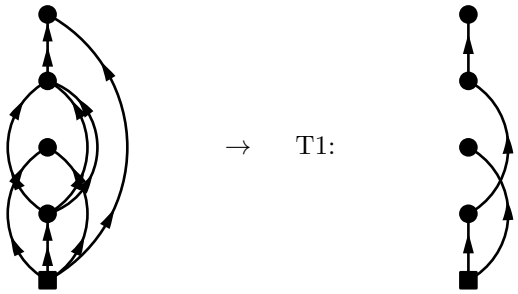


$$\text{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1024}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6} \\ a_2 &= \epsilon_{k_1 k_2} \\ a_3 &= \epsilon^{k_7}_{k_3 k_5 k_6} \\ a_4 &= \epsilon_{k_4 k_7} \end{aligned}$$

Diagram 506:

$$\begin{aligned} \text{PO4.506} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{02}_{k_2 k_3} \Omega^{13}_{k_8 k_5 k_6 k_7} \Omega^{02}_{k_8 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k_6 k_7}_{k_1}} e^{-\tau_2 \epsilon_{k_2 k_3}} \\ &= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{31}_{k_5 k_6 k_7 k_1} \Omega^{02}_{k_2 k_3} \Omega^{13}_{k_8 k_5 k_6 k_7} \Omega^{02}_{k_8 k_4}}{\epsilon_{k_1 k_4}\ \epsilon_{k_2 k_3}\ \epsilon_{k_5 k_6 k_7 k_4}\ \epsilon_{k_4 k_8}} \end{aligned} \tag{1025}$$

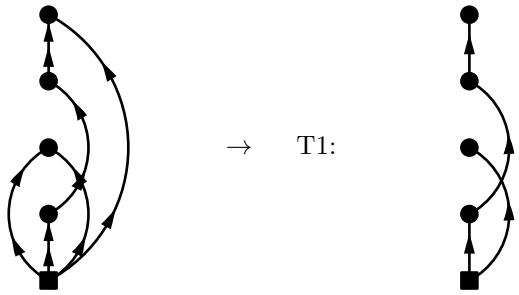


$$\mathrm{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1026}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_5 k_6 k_7} \\ a_2 &= \epsilon_{k_2 k_3} \\ a_3 &= \epsilon_{k_5 k_6 k_7}^{k_8} \\ a_4 &= \epsilon_{k_4 k_8} \end{aligned}$$

Diagram 507:

$$\begin{aligned} \mathrm{PO4.507} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{02}_{k_2k_3} \Omega^{11}_{k_6k_5} \Omega^{02}_{k_6k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon_{k_1}^{k_5}} e^{-\tau_2 \epsilon_{k_2k_3}} e^{-\tau_3 \epsilon_{k_5}^{k_6}} e^{-\tau_4 \epsilon_{k} \\ &= \frac{(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{02}_{k_2k_3} \Omega^{11}_{k_6k_5} \Omega^{02}_{k_6k_4}}{\epsilon_{k_1k_4}\ \epsilon_{k_2k_3}\ \epsilon_{k_5k_4}\ \epsilon_{k_4k_6}} \end{aligned} \tag{1027}$$



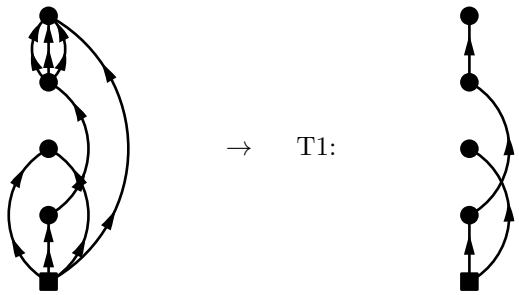
$\rightarrow$ T1:

$$\mathrm{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1028}$$

$$\begin{aligned} a_1 &= \epsilon_{k_1}^{k_5} \\ a_2 &= \epsilon_{k_2 k_3} \\ a_3 &= \epsilon_{k_5}^{k_6} \\ a_4 &= \epsilon_{k_4 k_6} \end{aligned}$$

Diagram 508:

$$\begin{aligned} \mathrm{PO4.508} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{02}_{k_2k_3} \Omega^{31}_{k_6k_7k_8k_5} \Omega^{04}_{k_6k_7k_8k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon_{k_1}^{k_5}} e^{-\tau_2 \epsilon_{k_2k_3}} e^{-\tau_3} \\ &= \frac{(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{11}_{k_5k_1} \Omega^{02}_{k_2k_3} \Omega^{31}_{k_6k_7k_8k_5} \Omega^{04}_{k_6k_7k_8k_4}}{\epsilon_{k_1k_4}\ \epsilon_{k_2k_3}\ \epsilon_{k_5k_4}\ \epsilon_{k_4k_6k_7k_8}} \end{aligned} \tag{1029}$$



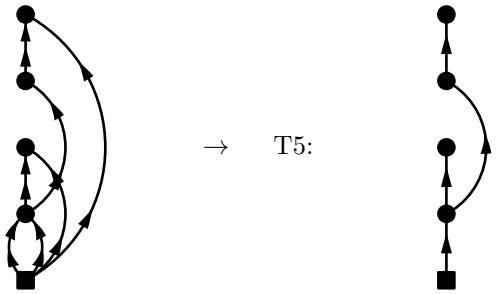
$\rightarrow$ T1:

$$\mathrm{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1030}$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon_{k_2 k_3}$$
$$a_3 = \epsilon^{k_6 k_7 k_8}_{k_5}$$
$$a_4 = \epsilon_{k_4 k_6 k_7 k_8}$$

Diagram 509:

$$\text{PO4.509} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{02}_{k_5 k_3} \Omega^{11}_{k_7 k_6} \Omega^{02}_{k_7 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5 k_6}_{k_1 k_2}} e^{-\tau_2}$$
$$= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{02}_{k_5 k_3} \Omega^{11}_{k_7 k_6} \Omega^{02}_{k_7 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_3 k_5}\ \epsilon_{k_6 k_4}\ \epsilon_{k_4 k_7}} \tag{1031}$$

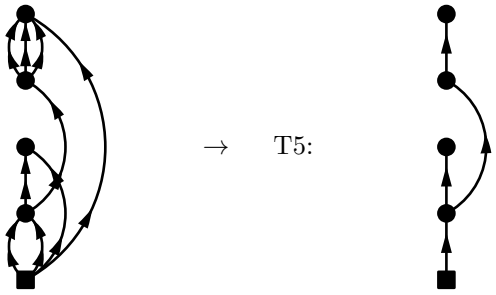


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1032}$$

$$a_1 = \epsilon^{k_5 k_6}_{k_1 k_2}$$
$$a_2 = \epsilon_{k_3 k_5}$$
$$a_3 = \epsilon^{k_7}_{k_6}$$
$$a_4 = \epsilon_{k_4 k_7}$$

Diagram 510:

$$\text{PO4.510} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{02}_{k_5 k_3} \Omega^{31}_{k_7 k_8 k_9 k_6} \Omega^{04}_{k_7 k_8 k_9 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k}_{k}}$$
$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{02}_{k_5 k_3} \Omega^{31}_{k_7 k_8 k_9 k_6} \Omega^{04}_{k_7 k_8 k_9 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_3 k_5}\ \epsilon_{k_6 k_4}\ \epsilon_{k_4 k_7 k_8 k_9}} \tag{1033}$$



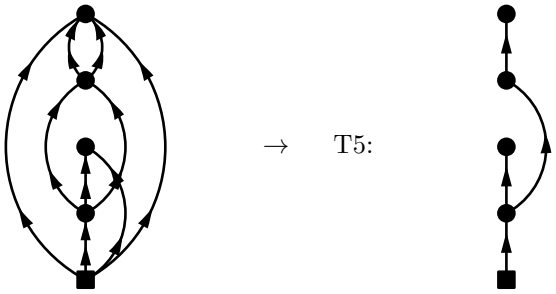
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1034}$$

$$a_1 = \epsilon^{k_5 k_6}_{k_1 k_2}$$
$$a_2 = \epsilon_{k_3 k_5}$$
$$a_3 = \epsilon^{k_7 k_8 k_9}_{k_6}$$
$$a_4 = \epsilon_{k_4 k_7 k_8 k_9}$$

Diagram 511:

$$\text{PO4.511} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_2} \Omega^{22}_{k_8k_9k_6k_7} \Omega^{04}_{k_8k_9k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k}_{k_1}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_2} \Omega^{22}_{k_8k_9k_6k_7} \Omega^{04}_{k_8k_9k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_5}\ \epsilon_{k_6k_7k_3k_4}\ \epsilon_{k_3k_4k_8k_9}} \tag{1035}$$



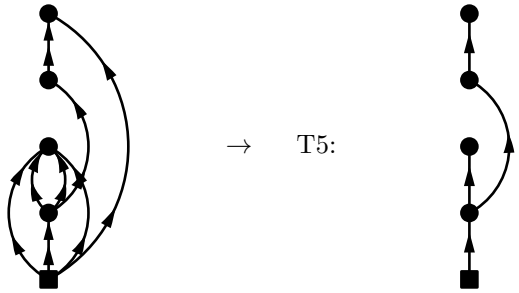
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1036}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_5}$$
$$a_3 = \epsilon^{k_8k_9}_{k_6k_7}$$
$$a_4 = \epsilon_{k_3k_4k_8k_9}$$

Diagram 512:

$$\text{PO4.512} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{04}_{k_5k_6k_2k_3} \Omega^{11}_{k_8k_7} \Omega^{02}_{k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k_6k_7}_{k_1}} \epsilon$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{04}_{k_5k_6k_2k_3} \Omega^{11}_{k_8k_7} \Omega^{02}_{k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_6}\ \epsilon_{k_7k_4}\ \epsilon_{k_4k_8}} \tag{1037}$$



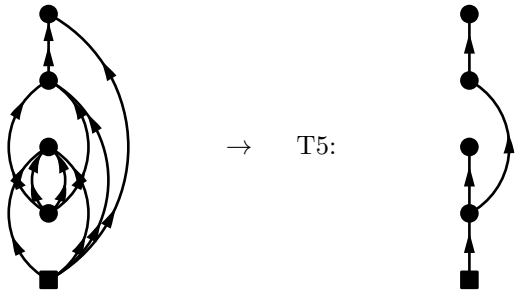
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1038}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3k_5k_6}$$
$$a_3 = \epsilon^{k_8}_{k_7}$$
$$a_4 = \epsilon_{k_4k_8}$$

Diagram 513:

$$\text{PO4.513} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{13}_{k_9k_7k_8k_3} \Omega^{02}_{k_9k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{13}_{k_9k_7k_8k_3} \Omega^{02}_{k_9k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_3k_7k_8k_4}\ \epsilon_{k_4k_9}} \tag{1039}$$

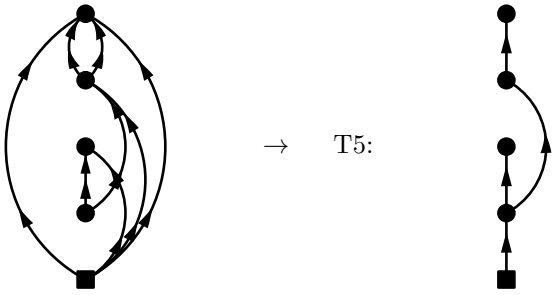


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1040}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon_{k_1k_2k_5k_6} \\ a_3 &= \epsilon^{k_9}_{k_3k_7k_8} \\ a_4 &= \epsilon_{k_4k_9} \end{aligned}$$

Diagram 514:

$$\begin{aligned} \text{PO4.514} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_5k_1}\Omega^{22}_{k_7k_8k_6k_2}\Omega^{04}_{k_7k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}}\epsilon \\ &= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_5k_1}\Omega^{22}_{k_7k_8k_6k_2}\Omega^{04}_{k_7k_8k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5}\ \epsilon_{k_2k_6k_3k_4}\ \epsilon_{k_3k_4k_7k_8}} \end{aligned} \tag{1041}$$

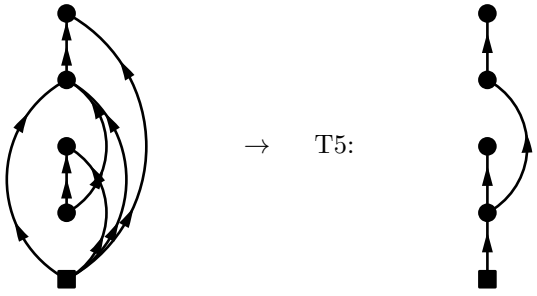


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1042}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6} \\ a_2 &= \epsilon_{k_1k_5} \\ a_3 &= \epsilon^{k_7k_8}_{k_2k_6} \\ a_4 &= \epsilon_{k_3k_4k_7k_8} \end{aligned}$$

Diagram 515:

$$\begin{aligned} \text{PO4.515} &= \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_5k_1}\Omega^{13}_{k_7k_6k_2k_3}\Omega^{02}_{k_7k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}}e^{-\tau_2} \\ &= \frac{-(-1)^4}{(2!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_5k_1}\Omega^{13}_{k_7k_6k_2k_3}\Omega^{02}_{k_7k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5}\ \epsilon_{k_2k_3k_6k_4}\ \epsilon_{k_4k_7}} \end{aligned} \tag{1043}$$



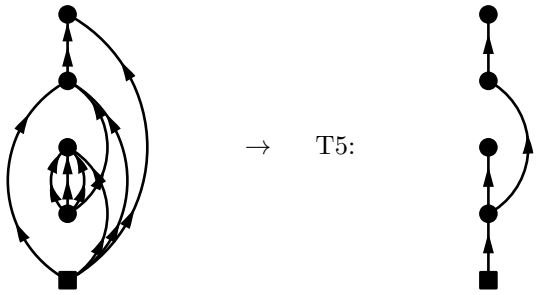
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1044}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_5}$$
$$a_3 = \epsilon^{k_7}_{k_2k_3k_6}$$
$$a_4 = \epsilon_{k_4k_7}$$

Diagram 516:

$$\text{PO4.516} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_6k_7k_1}\Omega^{13}_{k_9k_8k_2k_3}\Omega^{02}_{k_9k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^k}$$

$$= \frac{-(-1)^4}{(2!)(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{04}_{k_5k_6k_7k_1}\Omega^{13}_{k_9k_8k_2k_3}\Omega^{02}_{k_9k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_5k_6k_7}\ \epsilon_{k_2k_3k_8k_4}\ \epsilon_{k_4k_9}} \tag{1045}$$



$\rightarrow$ T5:

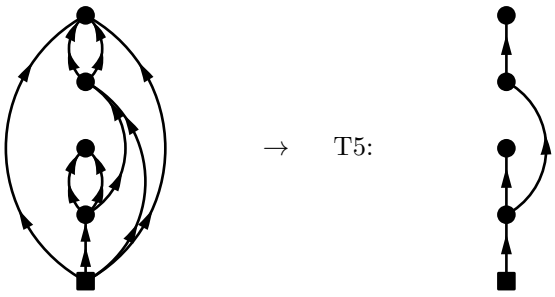
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1046}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_5k_6k_7}$$
$$a_3 = \epsilon^{k_9}_{k_2k_3k_8}$$
$$a_4 = \epsilon_{k_4k_9}$$

Diagram 517:

$$\text{PO4.517} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{02}_{k_5k_6}\Omega^{22}_{k_8k_9k_7k_2}\Omega^{04}_{k_8k_9k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k}_{k_1}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{02}_{k_5k_6}\Omega^{22}_{k_8k_9k_7k_2}\Omega^{04}_{k_8k_9k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_2k_7k_3k_4}\ \epsilon_{k_3k_4k_8k_9}} \tag{1047}$$



$\rightarrow$ T5:

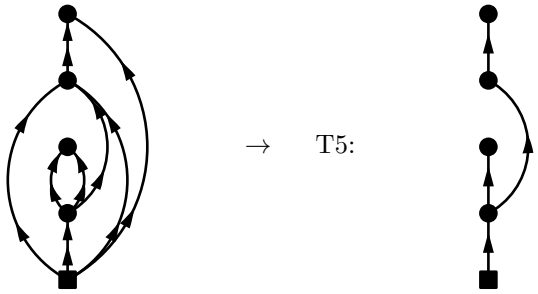
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1048}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_5k_6}$$
$$a_3 = \epsilon^{k_8k_9}_{k_2k_7}$$
$$a_4 = \epsilon_{k_3k_4k_8k_9}$$

Diagram 518:

$$\text{PO4.518} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_6} \Omega^{13}_{k_8k_7k_2k_3} \Omega^{02}_{k_8k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5k_6k_7}_{k_1}} \epsilon$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{02}_{k_5k_6} \Omega^{13}_{k_8k_7k_2k_3} \Omega^{02}_{k_8k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_2k_3k_7k_4}\ \epsilon_{k_4k_8}} \tag{1049}$$



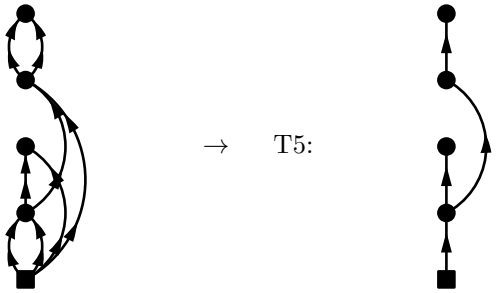
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1050}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_5k_6}$$
$$a_3 = \epsilon^{k_8}_{k_2k_3k_7}$$
$$a_4 = \epsilon_{k_4k_8}$$

Diagram 519:

$$\text{PO4.519} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{02}_{k_5k_3} \Omega^{22}_{k_7k_8k_6k_4} \Omega^{02}_{k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5k_6}_{k_1k_2}} \epsilon$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{02}_{k_5k_3} \Omega^{22}_{k_7k_8k_6k_4} \Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_5}\ \epsilon_{k_4k_6}\ \epsilon_{k_7k_8}} \tag{1051}$$



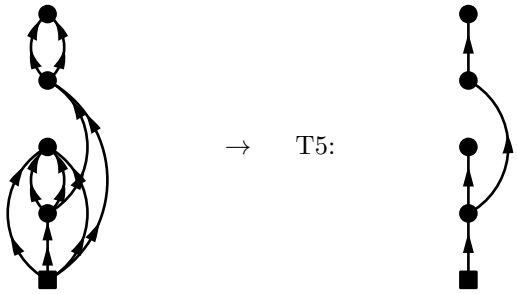
$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1052}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon_{k_3k_5}$$
$$a_3 = \epsilon^{k_7k_8}_{k_4k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 520:

$$\text{PO4.520} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{04}_{k_5k_6k_2k_3} \Omega^{22}_{k_8k_9k_7k_4} \Omega^{02}_{k_8k_9} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1 \epsilon^{k_5k}_{k_1}}$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{31}_{k_5k_6k_7k_1} \Omega^{04}_{k_5k_6k_2k_3} \Omega^{22}_{k_8k_9k_7k_4} \Omega^{02}_{k_8k_9}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_2k_3k_5k_6}\ \epsilon_{k_4k_7}\ \epsilon_{k_8k_9}} \tag{1053}$$

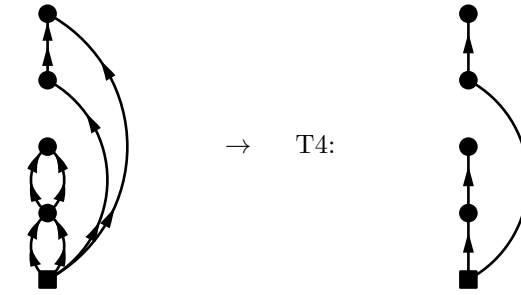


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1054}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_3k_5k_6}$$
$$a_3 = \epsilon^{k_8k_9}_{k_4k_7}$$
$$a_4 = \epsilon_{k_8k_9}$$

Diagram 521:

$$\text{PO4.521} = \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^2}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{02}_{k_5k_6}\Omega^{11}_{k_7k_3}\Omega^{02}_{k_7k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}_{k_1k_2}}e^{-\tau_2\epsilon_{k_5k_6}}e^{-\tau_3\epsilon^{k_7}_{k_3}}$$
$$= \frac{(-1)^4}{(2!)^2}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{02}_{k_5k_6}\Omega^{11}_{k_7k_3}\Omega^{02}_{k_7k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_5k_6}\ \epsilon_{k_3k_4}\ \epsilon_{k_4k_7}} \tag{1055}$$

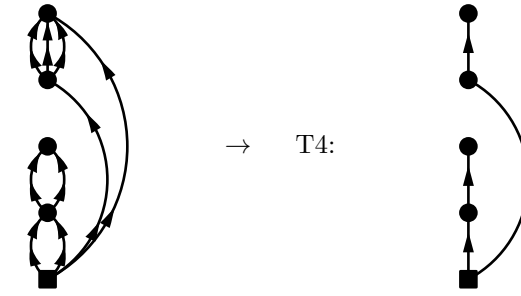


$$\text{T4} = \frac{1}{(a_1+a_2)a_2(a_3+a_4)a_4} \tag{1056}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon_{k_5k_6}$$
$$a_3 = \epsilon^{k_7}_{k_3}$$
$$a_4 = \epsilon_{k_4k_7}$$

Diagram 522:

$$\text{PO4.522} = \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^2(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{02}_{k_5k_6}\Omega^{31}_{k_7k_8k_9k_3}\Omega^{04}_{k_7k_8k_9k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}_{k_1k_2}}e^{-\tau_2\epsilon_{k_5k_6}}$$
$$= \frac{(-1)^4}{(2!)^2(3!)}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{02}_{k_5k_6}\Omega^{31}_{k_7k_8k_9k_3}\Omega^{04}_{k_7k_8k_9k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_5k_6}\ \epsilon_{k_3k_4}\ \epsilon_{k_4k_7k_8k_9}} \tag{1057}$$

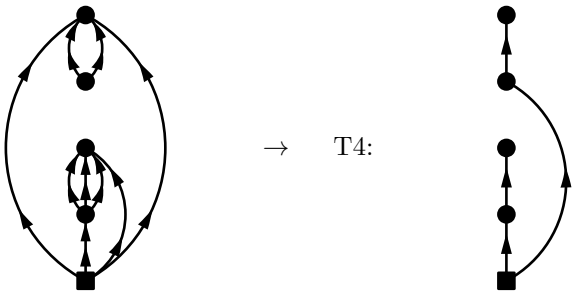


$$\mathrm{T4} = \frac{1}{(a_1+a_2)a_2(a_3+a_4)a_4} \tag{1058}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon_{k_5k_6}$$
$$a_3 = \epsilon^{k_7k_8k_9}_{k_3}$$
$$a_4 = \epsilon_{k_4k_7k_8k_9}$$

Diagram 523:

$$\mathrm{PO4.523} = \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^2(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_6k_7k_2}\Omega^{20}_{k_8k_9}\Omega^{04}_{k_8k_9k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6k_7}_{k_1}}e^{-\tau_2}$$
$$= \frac{(-1)^4}{(2!)^2(3!)}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{31}_{k_5k_6k_7k_1}\Omega^{04}_{k_5k_6k_7k_2}\Omega^{20}_{k_8k_9}\Omega^{04}_{k_8k_9k_3k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_5k_6k_7}\ \epsilon_{k_3k_4}\ \epsilon_{k_3k_4k_8k_9}} \tag{1059}$$

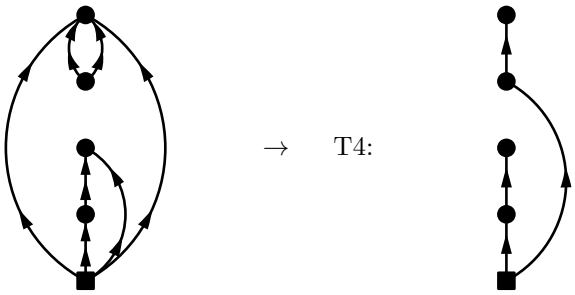


$$\mathrm{T4} = \frac{1}{(a_1+a_2)a_2(a_3+a_4)a_4} \tag{1060}$$

$$a_1 = \epsilon^{k_5k_6k_7}_{k_1}$$
$$a_2 = \epsilon_{k_2k_5k_6k_7}$$
$$a_3 = \epsilon^{k_8k_9}$$
$$a_4 = \epsilon_{k_3k_4k_8k_9}$$

Diagram 524:

$$\mathrm{PO4.524} = \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^2}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{02}_{k_5k_2}\Omega^{20}_{k_6k_7}\Omega^{04}_{k_6k_7k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5}_{k_1}}e^{-\tau_2\epsilon_{k_2k_5}}e^{-\tau_3\epsilon^{k_6k_7}}$$
$$= \frac{(-1)^4}{(2!)^2}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{11}_{k_5k_1}\Omega^{02}_{k_5k_2}\Omega^{20}_{k_6k_7}\Omega^{04}_{k_6k_7k_3k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_2k_5}\ \epsilon_{k_3k_4}\ \epsilon_{k_3k_4k_6k_7}} \tag{1061}$$



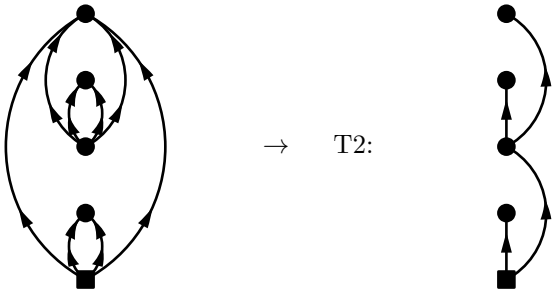
$$\mathrm{T4} = \frac{1}{(a_1+a_2)a_2(a_3+a_4)a_4} \tag{1062}$$

$$a_1 = \epsilon^{k_5}_{k_1}$$
$$a_2 = \epsilon_{k_2k_5}$$
$$a_3 = \epsilon^{k_6k_7}$$
$$a_4 = \epsilon_{k_3k_4k_6k_7}$$

Diagram 525:

$$\text{PO4.525} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{02}_{k_1k_2} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{02}_{k_5k_6} \Omega^{04}_{k_7k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2) e^{-\tau_1\epsilon_{k_1k_2}} e^{-\tau_2\epsilon^{k_5k_6k_7k_8}}$$

$$= \frac{(-1)^4}{(2!)^4} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{02}_{k_1k_2} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{02}_{k_5k_6} \Omega^{04}_{k_7k_8k_3k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_3k_4k_7k_8}} \tag{1063}$$



$\rightarrow$ T2:

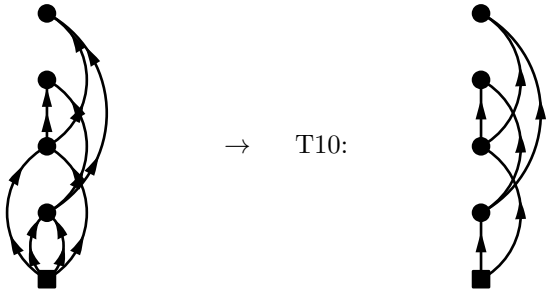
$$\text{T2} = \frac{1}{a_1(a_2+a_3+a_4)a_3a_4} \tag{1064}$$

$$a_1 = \epsilon_{k_1k_2}$$
$$a_2 = \epsilon^{k_5k_6k_7k_8}$$
$$a_3 = \epsilon_{k_5k_6}$$
$$a_4 = \epsilon_{k_3k_4k_7k_8}$$

Diagram 526:

$$\text{PO4.526} = \lim_{\tau\to\infty} \frac{-(-1)^4}{4(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{02}_{k_7k_5} \Omega^{02}_{k_8k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)$$

$$= \frac{-(-1)^4}{4(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{02}_{k_7k_5} \Omega^{02}_{k_8k_6} \left[\frac{1}{\epsilon_{k_1k_2k_7k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_7}\ \epsilon_{k_6k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_4k_5k_6}\ \epsilon_{k_5k_7}\ \epsilon_{k_6}} \right. \tag{1065}$$



$\rightarrow$ T10:

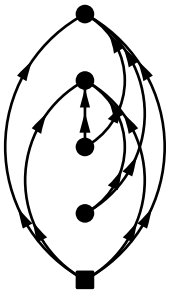
$$\text{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{1066}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7k_8}_{k_3k_4}$$
$$a_3 = \epsilon_{k_5k_7}$$
$$a_4 = \epsilon_{k_6k_8}$$

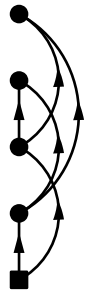
Diagram 527:

$$\text{PO4.527} = \lim_{\tau\to\infty} \frac{-(-1)^4}{4(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{20}_{k_7k_8} \Omega^{04}_{k_7k_5k_1k_2} \Omega^{04}_{k_8k_6k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)$$

$$= \frac{-(-1)^4}{4(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{20}_{k_7k_8} \Omega^{04}_{k_7k_5k_1k_2} \Omega^{04}_{k_8k_6k_3k_4} \left[\frac{1}{\epsilon_{k_1k_2k_7k_3k_4k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_7}\ \epsilon_{k_3k_4k_6k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k}} \right. \tag{1067}$$



$\rightarrow$ T10:

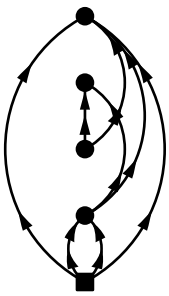


$$\text{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{1068}$$

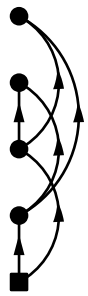
$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}$$
$$a_3 = \epsilon_{k_1k_2k_5k_7}$$
$$a_4 = \epsilon_{k_3k_4k_6k_8}$$

Diagram 528:

$$\text{PO4.528} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{20}_{k_7k_8} \Omega^{02}_{k_7k_5} \Omega^{04}_{k_8k_6k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)$$
$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{20}_{k_7k_8} \Omega^{02}_{k_7k_5} \Omega^{04}_{k_8k_6k_3k_4} \left[\frac{1}{\epsilon_{k_1k_2k_7k_3k_4k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_7}\ \epsilon_{k_3k_4k_6k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_3k_4k_6}\ } \right. \tag{1069}$$



$\rightarrow$ T10:

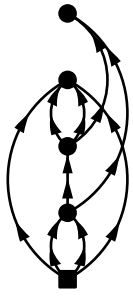


$$\text{T10} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)a_3a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{1070}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7k_8}$$
$$a_3 = \epsilon_{k_5k_7}$$
$$a_4 = \epsilon_{k_3k_4k_6k_8}$$

Diagram 529:

$$\text{PO4.529} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{04}_{k_7k_8k_3k_4} \Omega^{02}_{k_9k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau$$
$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{04}_{k_7k_8k_3k_4} \Omega^{02}_{k_9k_6}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_3k_4k_7k_8}\ \epsilon_{k_6k_9}} \tag{1071}$$



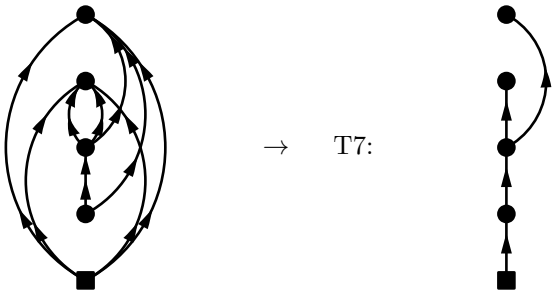
$\rightarrow$ T7:

$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{1072}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7k_8k_9}_{k_5}$$
$$a_3 = \epsilon_{k_3k_4k_7k_8}$$
$$a_4 = \epsilon_{k_6k_9}$$

Diagram 530:

$$\mathrm{PO4.530} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{04}_{k_7k_8k_1k_2} \Omega^{04}_{k_9k_6k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau$$
$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{04}_{k_7k_8k_1k_2} \Omega^{04}_{k_9k_6k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_1k_2k_3k_4k_6}\ \epsilon_{k_1k_2k_7k_8}\ \epsilon_{k_3k_4k_6k_9}} \tag{1073}$$



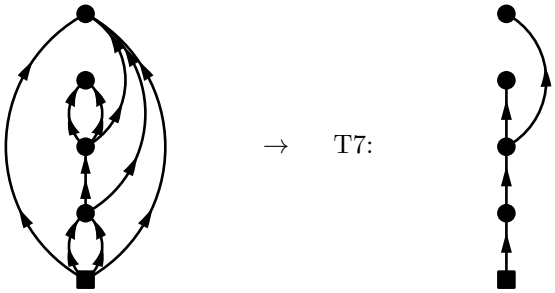
$\rightarrow$ T7:

$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{1074}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8k_9}_{k_5}$$
$$a_3 = \epsilon_{k_1k_2k_7k_8}$$
$$a_4 = \epsilon_{k_3k_4k_6k_9}$$

Diagram 531:

$$\mathrm{PO4.531} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{02}_{k_7k_8} \Omega^{04}_{k_9k_6k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau$$
$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{02}_{k_7k_8} \Omega^{04}_{k_9k_6k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_7k_8}\ \epsilon_{k_3k_4k_6k_9}} \tag{1075}$$



$\rightarrow$ T7:

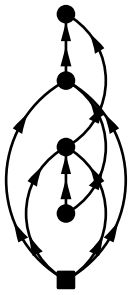
$$\mathrm{T7} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)a_3a_4} \tag{1076}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7k_8k_9}_{k_5}$$
$$a_3 = \epsilon_{k_7k_8}$$
$$a_4 = \epsilon_{k_3k_4k_6k_9}$$

Diagram 532:

$$\text{PO4.532} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_1k_2} \Omega^{13}_{k_8k_6k_3k_4} \Omega^{02}_{k_8k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_1k_2} \Omega^{13}_{k_8k_6k_3k_4} \Omega^{02}_{k_8k_7} \left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_8}\ \epsilon_{k_1k_2k_5k_3k_4k_6}\ \epsilon_{k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_3k_} \right. \tag{1077}$$



$\rightarrow$ T11:

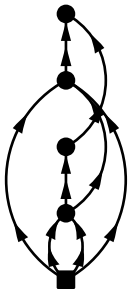
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1078}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1k_2k_5}$$
$$a_3 = \epsilon^{k_8}_{k_3k_4k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 533:

$$\text{PO4.533} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_5} \Omega^{13}_{k_8k_6k_3k_4} \Omega^{02}_{k_8k_7} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_5} \Omega^{13}_{k_8k_6k_3k_4} \Omega^{02}_{k_8k_7} \left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_8}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_3k_4k_6k_} \right. \tag{1079}$$



$\rightarrow$ T11:

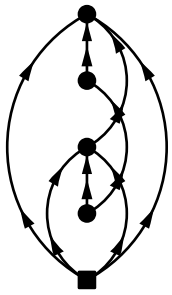
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1080}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7}_{k_5}$$
$$a_3 = \epsilon^{k_8}_{k_3k_4k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 534:

$$\text{PO4.534} = \lim_{\tau\to\infty} \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_1k_2} \Omega^{11}_{k_8k_6} \Omega^{04}_{k_8k_7k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_1k_2} \Omega^{11}_{k_8k_6} \Omega^{04}_{k_8k_7k_3k_4} \left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_3k_4k_8}\ \epsilon_{k_1k_2k_5k_6k_3k_4}\ \epsilon_{k_3k_4k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k} \right. \tag{1081}$$



$\rightarrow$ T11:

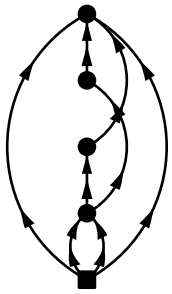
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1082}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon^{k_7}_{k_1k_2k_5}$$
$$a_3 = \epsilon^{k_8}_{k_6}$$
$$a_4 = \epsilon_{k_3k_4k_7k_8}$$

Diagram 535:

$$\text{PO4.535} = \lim_{\tau\to\infty} \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_5} \Omega^{11}_{k_8k_6} \Omega^{04}_{k_8k_7k_3k_4} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau_3)$$

$$= \frac{-(-1)^4}{2(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_5} \Omega^{11}_{k_8k_6} \Omega^{04}_{k_8k_7k_3k_4} \left[\frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_3k_4k_8}\ \epsilon_{k_5k_6k_3k_4}\ \epsilon_{k_3k_4k_7k_8}} + \frac{1}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_3k_4}\ \epsilon} \right. \tag{1083}$$



$\rightarrow$ T11:

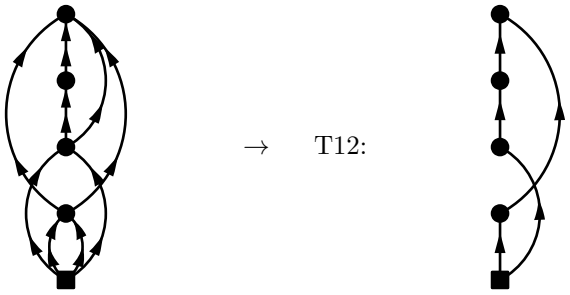
$$\text{T11} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_4)(a_3+a_2+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1084}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7}_{k_5}$$
$$a_3 = \epsilon^{k_8}_{k_6}$$
$$a_4 = \epsilon_{k_3k_4k_7k_8}$$

Diagram 536:

$$\text{PO4.536} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{11}_{k_9k_7} \Omega^{04}_{k_9k_8k_5k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{11}_{k_9k_7} \Omega^{04}_{k_9k_8k_5k_6} \left[\frac{1}{\epsilon_{k_1k_2k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_7k_8}\ \epsilon_{k_5k_6k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_7k_8}\ \epsilon_{k_1k_2k_3k} \right. \tag{1085}$$



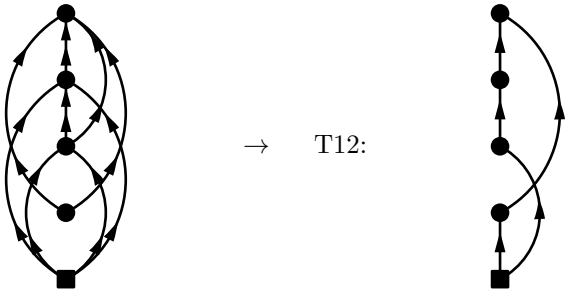
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{1086}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7k_8}_{k_3k_4}$$
$$a_3 = \epsilon^{k_9}_{k_7}$$
$$a_4 = \epsilon_{k_5k_6k_8k_9}$$

Diagram 537:

$$\text{PO4.537} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_1k_2} \Omega^{13}_{k_9k_7k_3k_4} \Omega^{04}_{k_9k_8k_5k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_1k_2} \Omega^{13}_{k_9k_7k_3k_4} \Omega^{04}_{k_9k_8k_5k_6} \left[\frac{1}{\epsilon_{k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_4k_7k_8}\ \epsilon_{k_5k_6k_8k_9}} + \frac{1}{\epsilon_{k_3k_4k_7k_8}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k} \right. \tag{1087}$$



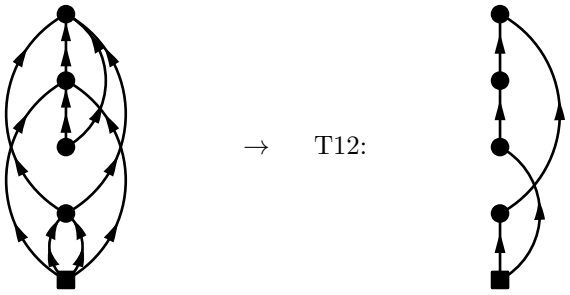
$$\text{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{1088}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon^{k_7k_8}_{k_1k_2}$$
$$a_3 = \epsilon^{k_9}_{k_3k_4k_7}$$
$$a_4 = \epsilon_{k_5k_6k_8k_9}$$

Diagram 538:

$$\mathrm{PO4.538} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{20}_{k_7k_8} \Omega^{13}_{k_9k_7k_3k_4} \Omega^{04}_{k_9k_8k_5k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{20}_{k_7k_8} \Omega^{13}_{k_9k_7k_3k_4} \Omega^{04}_{k_9k_8k_5k_6} \left[\frac{1}{\epsilon_{k_1k_2k_8k_9}\ \epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_3k_4k_7k_8}\ \epsilon_{k_5k_6k_8k_9}} + \frac{}{\epsilon_{k_1k_2k_3k_4k_7k_8}} \right. \tag{1089}$$



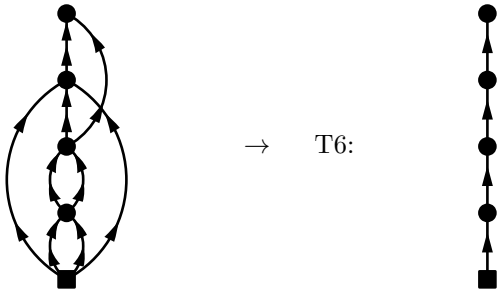
$$\mathrm{T12} = \frac{1}{(a_1+a_4)(a_2+a_1+a_3+a_4)(a_3+a_1+a_4)a_4} + \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2} \tag{1090}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7k_8}$$
$$a_3 = \epsilon^{k_9}_{k_3k_4k_7}$$
$$a_4 = \epsilon_{k_5k_6k_8k_9}$$

Diagram 539:

$$\mathrm{PO4.539} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{13}_{k_9k_7k_3k_4} \Omega^{02}_{k_9k_8} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{13}_{k_9k_7k_3k_4} \Omega^{02}_{k_9k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_3k_4}\ \epsilon_{k_3k_4k_7k_8}\ \epsilon_{k_8k_9}} \tag{1091}$$



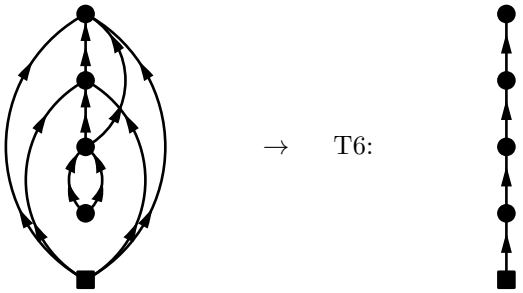
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1092}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7k_8}_{k_5k_6}$$
$$a_3 = \epsilon^{k_9}_{k_3k_4k_7}$$
$$a_4 = \epsilon_{k_8k_9}$$

Diagram 540:

$$\text{PO4.540} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{13}_{k_9k_7k_1k_2} \Omega^{04}_{k_9k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{13}_{k_9k_7k_1k_2} \Omega^{04}_{k_9k_8k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_7k_3k_4k_8}\ \epsilon_{k_3k_4k_8k_9}} \tag{1093}$$



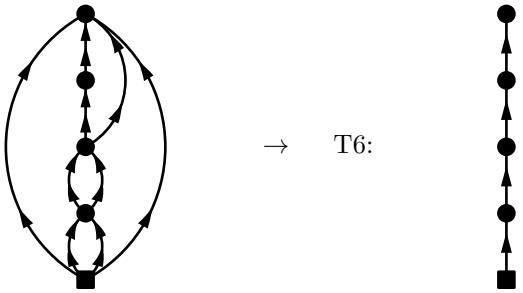
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1094}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6} \\ a_2 &= \epsilon^{k_7k_8}_{k_5k_6} \\ a_3 &= \epsilon^{k_9}_{k_1k_2k_7} \\ a_4 &= \epsilon_{k_3k_4k_8k_9} \end{aligned}$$

Diagram 541:

$$\text{PO4.541} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{11}_{k_9k_7} \Omega^{04}_{k_9k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{11}_{k_9k_7} \Omega^{04}_{k_9k_8k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_3k_4}\ \epsilon_{k_7k_3k_4k_8}\ \epsilon_{k_3k_4k_8k_9}} \tag{1095}$$



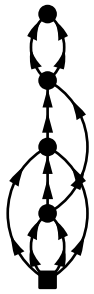
$$\text{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1096}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6}_{k_1k_2} \\ a_2 &= \epsilon^{k_7k_8}_{k_5k_6} \\ a_3 &= \epsilon^{k_9}_{k_7} \\ a_4 &= \epsilon_{k_3k_4k_8k_9} \end{aligned}$$

Diagram 542:

$$\text{PO4.542} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{13}_{k_7k_5k_3k_4} \Omega^{22}_{k_8k_9k_7k_6} \Omega^{02}_{k_8k_9} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{13}_{k_7k_5k_3k_4} \Omega^{22}_{k_8k_9k_7k_6} \Omega^{02}_{k_8k_9}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_3k_4k_5k_6}\ \epsilon_{k_6k_7}\ \epsilon_{k_8k_9}} \tag{1097}$$



→ T6:

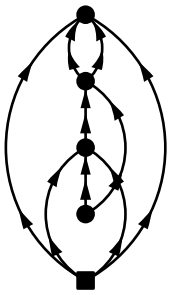
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1098}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7}_{k_3 k_4 k_5} \\ a_3 &= \epsilon^{k_8 k_9}_{k_6 k_7} \\ a_4 &= \epsilon_{k_8 k_9} \end{aligned}$$

Diagram 543:

$$\mathrm{PO4.543} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_1k_2} \Omega^{22}_{k_8k_9k_7k_6} \Omega^{04}_{k_8k_9k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{13}_{k_7k_5k_1k_2} \Omega^{22}_{k_8k_9k_7k_6} \Omega^{04}_{k_8k_9k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_6k_3k_4}\ \epsilon_{k_6k_7k_3k_4}\ \epsilon_{k_3k_4k_8k_9}} \tag{1099}$$



→ T6:

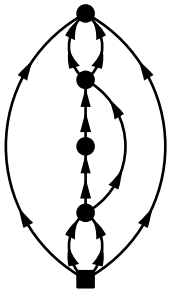
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1100}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6} \\ a_2 &= \epsilon^{k_7}_{k_1 k_2 k_5} \\ a_3 &= \epsilon^{k_8 k_9}_{k_6 k_7} \\ a_4 &= \epsilon_{k_3 k_4 k_8 k_9} \end{aligned}$$

Diagram 544:

$$\mathrm{PO4.544} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_5} \Omega^{22}_{k_8k_9k_7k_6} \Omega^{04}_{k_8k_9k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_5} \Omega^{22}_{k_8k_9k_7k_6} \Omega^{04}_{k_8k_9k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6k_3k_4}\ \epsilon_{k_6k_7k_3k_4}\ \epsilon_{k_3k_4k_8k_9}} \tag{1101}$$



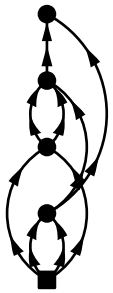
→ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1102}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7}_{k_5} \\ a_3 &= \epsilon^{k_8 k_9}_{k_6 k_7} \\ a_4 &= \epsilon_{k_3 k_4 k_8 k_9} \end{aligned}$$

Diagram 545:

$$\begin{aligned} \mathrm{PO4.545} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_3 k_4} \Omega^{13}_{k_9 k_7 k_8 k_5} \Omega^{02}_{k_9 k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{22}_{k_7 k_8 k_3 k_4} \Omega^{13}_{k_9 k_7 k_8 k_5} \Omega^{02}_{k_9 k_6} \left[\frac{1}{\epsilon_{k_1 k_2 k_7 k_8}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_7 k_8 k_6}\ \epsilon_{k_6 k_9}} + \frac{1}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_3 k_4 k_5 k_6}\ \epsilon_{k} \right. \end{aligned} \tag{1103}$$



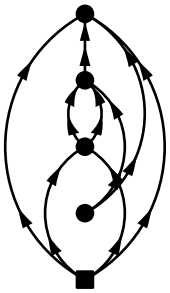
$\rightarrow$ T13:

$$\mathrm{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1104}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7 k_8}_{k_3 k_4} \\ a_3 &= \epsilon^{k_9}_{k_5 k_7 k_8} \\ a_4 &= \epsilon_{k_6 k_9} \end{aligned}$$

Diagram 546:

$$\begin{aligned} \mathrm{PO4.546} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{22}_{k_7 k_8 k_1 k_2} \Omega^{13}_{k_9 k_7 k_8 k_5} \Omega^{04}_{k_9 k_6 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{22}_{k_7 k_8 k_1 k_2} \Omega^{13}_{k_9 k_7 k_8 k_5} \Omega^{04}_{k_9 k_6 k_3 k_4} \left[\frac{1}{\epsilon_{k_7 k_8 k_3 k_4}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_7 k_8 k_3 k_4 k_6}\ \epsilon_{k_3 k_4 k_6 k_9}} + \frac{1}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k} \right. \end{aligned} \tag{1105}$$



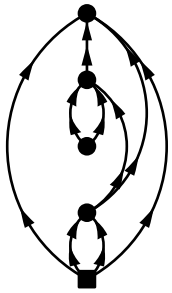
$\rightarrow$ T13:

$$\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \quad (1106)$$

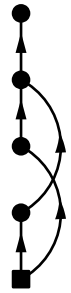
$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6} \\ a_2 &= \epsilon^{k_7 k_8}_{k_1 k_2} \\ a_3 &= \epsilon^{k_9}_{k_5 k_7 k_8} \\ a_4 &= \epsilon_{k_3 k_4 k_6 k_9} \end{aligned}$$

Diagram 547:

$$\begin{aligned} \text{PO4.547} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{20}_{k_7 k_8} \Omega^{13}_{k_9 k_7 k_8 k_5} \Omega^{04}_{k_9 k_6 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{20}_{k_7 k_8} \Omega^{13}_{k_9 k_7 k_8 k_5} \Omega^{04}_{k_9 k_6 k_3 k_4} \left[\frac{1}{\epsilon_{k_1 k_2 k_7 k_8 k_3 k_4}\ \epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_7 k_8 k_3 k_4 k_6}\ \epsilon_{k_3 k_4 k_6 k_9}} + \frac{}{\epsilon_{k_1 k_2 k_3 k_4}} \right. \end{aligned} \quad (1107)$$



$\rightarrow$ T13:

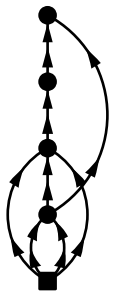


$$\text{T13} = \frac{1}{(a_1+a_3+a_4)(a_2+a_1+a_3+a_4)(a_3+a_4)a_4} + \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \quad (1108)$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7 k_8} \\ a_3 &= \epsilon^{k_9}_{k_5 k_7 k_8} \\ a_4 &= \epsilon_{k_3 k_4 k_6 k_9} \end{aligned}$$

Diagram 548:

$$\begin{aligned} \text{PO4.548} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{13}_{k_7 k_5 k_3 k_4} \Omega^{11}_{k_8 k_7} \Omega^{02}_{k_8 k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3)e^{} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{13}_{k_7 k_5 k_3 k_4} \Omega^{11}_{k_8 k_7} \Omega^{02}_{k_8 k_6}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_3 k_4 k_5 k_6}\ \epsilon_{k_7 k_6}\ \epsilon_{k_6 k_8}} \end{aligned} \quad (1109)$$



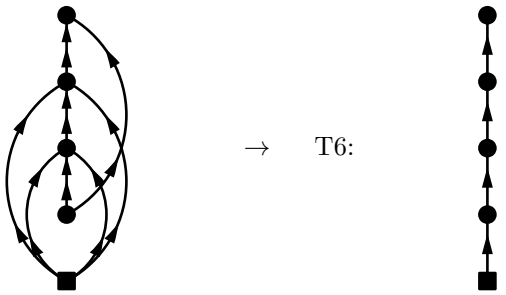
$\rightarrow$ T6:

$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1110}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\ a_2 &= \epsilon^{k_7}_{k_3 k_4 k_5} \\ a_3 &= \epsilon^{k_8}_{k_7} \\ a_4 &= \epsilon_{k_6 k_8} \end{aligned}$$

Diagram 549:

$$\begin{aligned} \mathrm{PO4.549} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_5 k_1 k_2} \Omega^{13}_{k_8 k_7 k_3 k_4} \Omega^{02}_{k_8 k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{\cdot} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_5 k_1 k_2} \Omega^{13}_{k_8 k_7 k_3 k_4} \Omega^{02}_{k_8 k_6}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_2 k_5 k_3 k_4 k_6}\ \epsilon_{k_3 k_4 k_7 k_6}\ \epsilon_{k_6 k_8}} \end{aligned} \tag{1111}$$

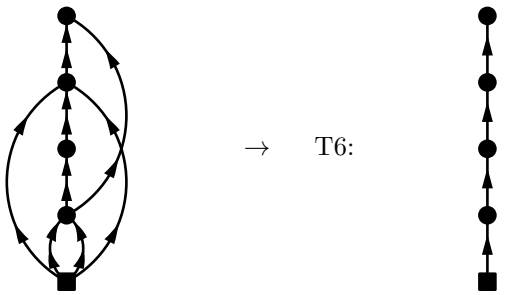


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1112}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5 k_6} \\ a_2 &= \epsilon^{k_7}_{k_1 k_2 k_5} \\ a_3 &= \epsilon^{k_8}_{k_3 k_4 k_7} \\ a_4 &= \epsilon_{k_6 k_8} \end{aligned}$$

Diagram 550:

$$\begin{aligned} \mathrm{PO4.550} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{11}_{k_7 k_5} \Omega^{13}_{k_8 k_7 k_3 k_4} \Omega^{02}_{k_8 k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{\cdot} \\ &= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{22}_{k_5 k_6 k_1 k_2} \Omega^{11}_{k_7 k_5} \Omega^{13}_{k_8 k_7 k_3 k_4} \Omega^{02}_{k_8 k_6}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_3 k_4 k_6}\ \epsilon_{k_3 k_4 k_7 k_6}\ \epsilon_{k_6 k_8}} \end{aligned} \tag{1113}$$

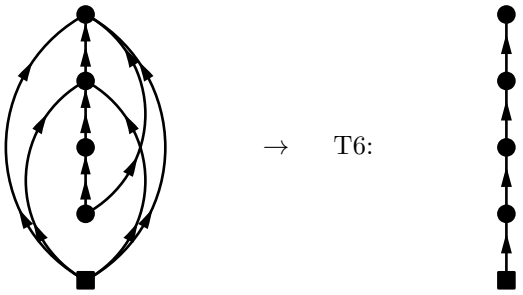


$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1114}$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6}_{k_1 k_2} \\
a_2 &= \epsilon^{k_7}_{k_5} \\
a_3 &= \epsilon^{k_8}_{k_3 k_4 k_7} \\
a_4 &= \epsilon_{k_6 k_8}
\end{aligned}
$$

Diagram 551:

$$
\begin{aligned}
\mathrm{PO4.551} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{11}_{k_7 k_5} \Omega^{13}_{k_8 k_7 k_1 k_2} \Omega^{04}_{k_8 k_6 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{\cdot} \\
&= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{11}_{k_7 k_5} \Omega^{13}_{k_8 k_7 k_1 k_2} \Omega^{04}_{k_8 k_6 k_3 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_5 k_1 k_2 k_3 k_4 k_6}\ \epsilon_{k_1 k_2 k_7 k_3 k_4 k_6}\ \epsilon_{k_3 k_4 k_6 k_8}}
\end{aligned} \tag{1115}
$$

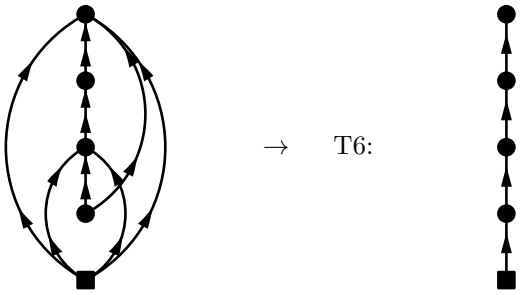


$$
\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1116}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6} \\
a_2 &= \epsilon^{k_7}_{k_5} \\
a_3 &= \epsilon^{k_8}_{k_1 k_2 k_7} \\
a_4 &= \epsilon_{k_3 k_4 k_6 k_8}
\end{aligned}
$$

Diagram 552:

$$
\begin{aligned}
\mathrm{PO4.552} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_5 k_1 k_2} \Omega^{11}_{k_8 k_7} \Omega^{04}_{k_8 k_6 k_3 k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{\cdot} \\
&= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1 k_2 k_3 k_4} \Omega^{20}_{k_5 k_6} \Omega^{13}_{k_7 k_5 k_1 k_2} \Omega^{11}_{k_8 k_7} \Omega^{04}_{k_8 k_6 k_3 k_4}}{\epsilon_{k_1 k_2 k_3 k_4}\ \epsilon_{k_1 k_2 k_5 k_3 k_4 k_6}\ \epsilon_{k_7 k_3 k_4 k_6}\ \epsilon_{k_3 k_4 k_6 k_8}}
\end{aligned} \tag{1117}
$$



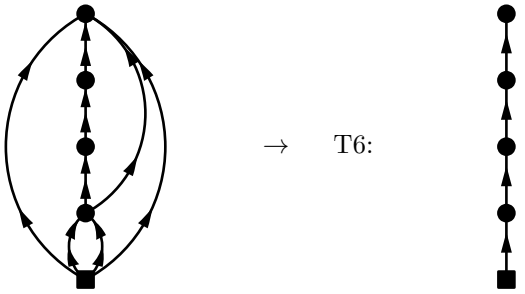
$$
\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1118}
$$

$$
\begin{aligned}
a_1 &= \epsilon^{k_5 k_6} \\
a_2 &= \epsilon^{k_7}_{k_1 k_2 k_5} \\
a_3 &= \epsilon^{k_8}_{k_7} \\
a_4 &= \epsilon_{k_3 k_4 k_6 k_8}
\end{aligned}
$$

Diagram 553:

$$\mathrm{PO4.553} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_5} \Omega^{11}_{k_8k_7} \Omega^{04}_{k_8k_6k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_3-\tau_2)\theta(\tau_4-\tau_3) e^{\cdot}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{11}_{k_7k_5} \Omega^{11}_{k_8k_7} \Omega^{04}_{k_8k_6k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_7k_3k_4k_6}\ \epsilon_{k_3k_4k_6k_8}} \tag{1119}$$



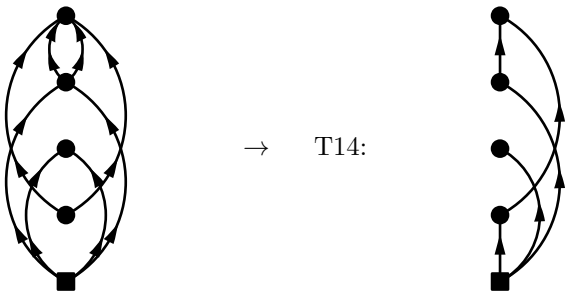
$$\mathrm{T6} = \frac{1}{(a_1+a_2+a_3+a_4)(a_2+a_3+a_4)(a_3+a_4)a_4} \tag{1120}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon^{k_7}_{k_5}$$
$$a_3 = \epsilon^{k_8}_{k_7}$$
$$a_4 = \epsilon_{k_3k_4k_6k_8}$$

Diagram 554:

$$\mathrm{PO4.554} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{02}_{k_1k_2} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{04}_{k_7k_8k_5k_6} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k_6}} e^{-\tau_2\epsilon_{k_1k_2}} e^{-\tau_{\cdot}}$$

$$= \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{02}_{k_1k_2} \Omega^{22}_{k_7k_8k_3k_4} \Omega^{04}_{k_7k_8k_5k_6} \left[\frac{1}{\epsilon_{k_3k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_6}\ \epsilon_{k_5k_6k_7k_8}} + \frac{1}{\epsilon_{k_7k_8}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6k_7k_8}} \right] \tag{1121}$$



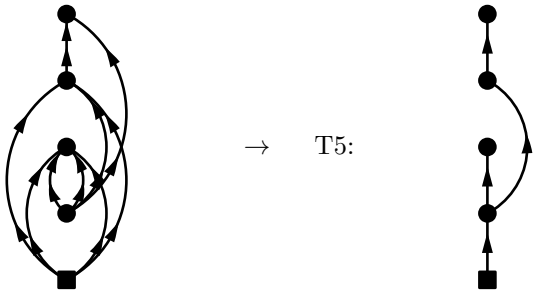
$$\mathrm{T14} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} + \frac{1}{(a_1+a_4)a_2(a_3+a_1+a_4)a_4} \tag{1122}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_2}$$
$$a_3 = \epsilon^{k_7k_8}_{k_3k_4}$$
$$a_4 = \epsilon_{k_5k_6k_7k_8}$$

Diagram 555:

$$\mathrm{PO4.555} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{13}_{k_9k_7k_3k_4} \Omega^{02}_{k_9k_8} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau$$

$$= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{13}_{k_9k_7k_3k_4} \Omega^{02}_{k_9k_8}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_3k_4k_7k_8}\ \epsilon_{k_8k_9}} \tag{1123}$$

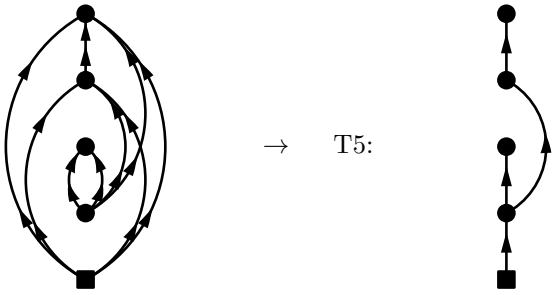


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1124}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon_{k_1k_2k_5k_6} \\ a_3 &= \epsilon^{k_9}_{k_3k_4k_7} \\ a_4 &= \epsilon_{k_8k_9} \end{aligned}$$

Diagram 556:

$$\begin{aligned} \text{PO4.556} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{02}_{k_5k_6} \Omega^{13}_{k_9k_7k_1k_2} \Omega^{04}_{k_9k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{02}_{k_5k_6} \Omega^{13}_{k_9k_7k_1k_2} \Omega^{04}_{k_9k_8k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_1k_2k_7k_3k_4k_8}\ \epsilon_{k_3k_4k_8k_9}} \end{aligned} \tag{1125}$$

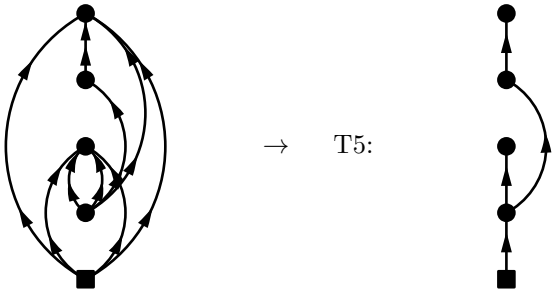


$$\text{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1126}$$

$$\begin{aligned} a_1 &= \epsilon^{k_5k_6k_7k_8} \\ a_2 &= \epsilon_{k_5k_6} \\ a_3 &= \epsilon^{k_9}_{k_1k_2k_7} \\ a_4 &= \epsilon_{k_3k_4k_8k_9} \end{aligned}$$

Diagram 557:

$$\begin{aligned} \text{PO4.557} &= \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^3} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{11}_{k_9k_7} \Omega^{04}_{k_9k_8k_3k_4} \int_0^\tau \mathrm{d}\tau_1 \mathrm{d}\tau_2 \mathrm{d}\tau_3 \mathrm{d}\tau_4 \theta(\tau_2-\tau_1)\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau \\ &= \frac{(-1)^4}{(2!)^3} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{04}_{k_5k_6k_1k_2} \Omega^{11}_{k_9k_7} \Omega^{04}_{k_9k_8k_3k_4}}{\epsilon_{k_1k_2k_3k_4}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_7k_3k_4k_8}\ \epsilon_{k_3k_4k_8k_9}} \end{aligned} \tag{1127}$$

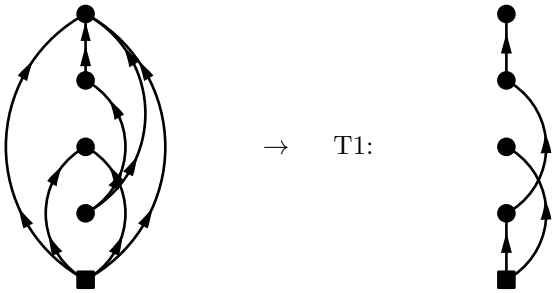


$$\mathrm{T5} = \frac{1}{(a_1+a_2+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1128}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_2k_5k_6}$$
$$a_3 = \epsilon^{k_9}_{k_7}$$
$$a_4 = \epsilon_{k_3k_4k_8k_9}$$

Diagram 558:

$$\mathrm{PO4.558} = \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^2}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_1k_2}\Omega^{11}_{k_7k_5}\Omega^{04}_{k_7k_6k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}}e^{-\tau_2\epsilon_{k_1}}$$
$$= \frac{(-1)^4}{(2!)^2}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_1k_2}\Omega^{11}_{k_7k_5}\Omega^{04}_{k_7k_6k_3k_4}}{\epsilon_{k_3k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_3k_4k_6}\ \epsilon_{k_3k_4k_6k_7}} \tag{1129}$$

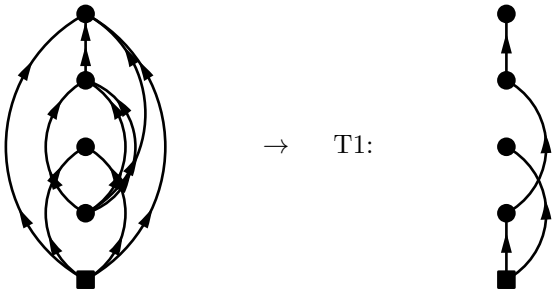


$$\mathrm{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1130}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_2}$$
$$a_3 = \epsilon^{k_7}_{k_5}$$
$$a_4 = \epsilon_{k_3k_4k_6k_7}$$

Diagram 559:

$$\mathrm{PO4.559} = \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^2(3!)}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{02}_{k_1k_2}\Omega^{13}_{k_9k_5k_6k_7}\Omega^{04}_{k_9k_8k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$
$$= \frac{(-1)^4}{(2!)^2(3!)}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{40}_{k_5k_6k_7k_8}\Omega^{02}_{k_1k_2}\Omega^{13}_{k_9k_5k_6k_7}\Omega^{04}_{k_9k_8k_3k_4}}{\epsilon_{k_3k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_6k_7k_3k_4k_8}\ \epsilon_{k_3k_4k_8k_9}} \tag{1131}$$



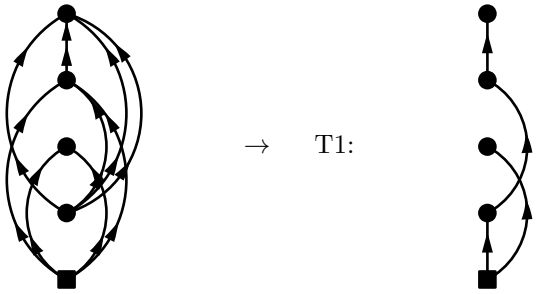
$$\mathrm{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1132}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_2}$$
$$a_3 = \epsilon^{k_9}_{k_5k_6k_7}$$
$$a_4 = \epsilon_{k_3k_4k_8k_9}$$

Diagram 560:

$$\text{PO4.560} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{02}_{k_1k_2} \Omega^{13}_{k_9k_5k_3k_4} \Omega^{04}_{k_9k_6k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon}$$

$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{40}_{k_5k_6k_7k_8} \Omega^{02}_{k_1k_2} \Omega^{13}_{k_9k_5k_3k_4} \Omega^{04}_{k_9k_6k_7k_8}}{\epsilon_{k_3k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_6k_7k_8}\ \epsilon_{k_6k_7k_8k_9}} \tag{1133}$$



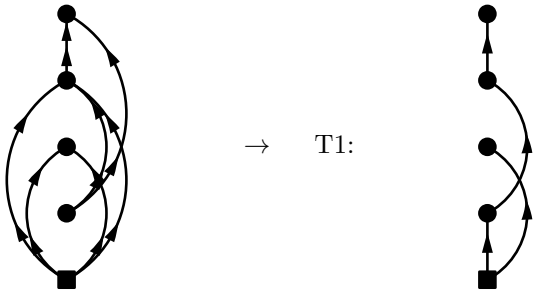
$$\text{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1134}$$

$$a_1 = \epsilon^{k_5k_6k_7k_8}$$
$$a_2 = \epsilon_{k_1k_2}$$
$$a_3 = \epsilon^{k_9}_{k_3k_4k_5}$$
$$a_4 = \epsilon_{k_6k_7k_8k_9}$$

Diagram 561:

$$\text{PO4.561} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{02}_{k_1k_2} \Omega^{13}_{k_7k_5k_3k_4} \Omega^{02}_{k_7k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k_6}} e^{-\tau_2\epsilon_{k_1}}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{20}_{k_5k_6} \Omega^{02}_{k_1k_2} \Omega^{13}_{k_7k_5k_3k_4} \Omega^{02}_{k_7k_6}}{\epsilon_{k_3k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_3k_4k_5k_6}\ \epsilon_{k_6k_7}} \tag{1135}$$



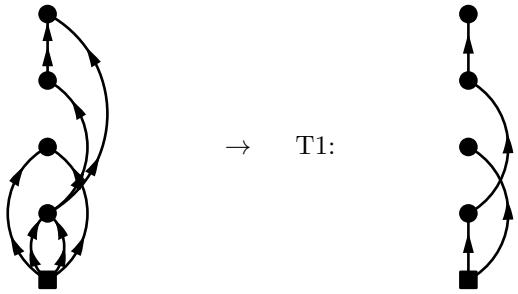
$$\text{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1136}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_2}$$
$$a_3 = \epsilon^{k_7}_{k_3k_4k_5}$$
$$a_4 = \epsilon_{k_6k_7}$$

Diagram 562:

$$\text{PO4.562} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{02}_{k_3k_4} \Omega^{11}_{k_7k_5} \Omega^{02}_{k_7k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4 \theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3) e^{-\tau_1\epsilon^{k_5k_6}_{k_1k_2}} e^{-\tau_2\epsilon_{k_3}}$$

$$= \frac{(-1)^4}{(2!)^2} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{02}_{k_3k_4} \Omega^{11}_{k_7k_5} \Omega^{02}_{k_7k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_6k_7}} \tag{1137}$$

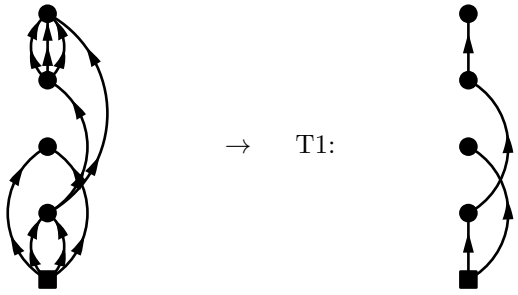


$$\text{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1138}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon_{k_3k_4}$$
$$a_3 = \epsilon^{k_7}_{k_5}$$
$$a_4 = \epsilon_{k_6k_7}$$

Diagram 563:

$$\text{PO4.563} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{02}_{k_3k_4} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{04}_{k_7k_8k_9k_6} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon}$$
$$= \frac{(-1)^4}{(2!)^2(3!)} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{02}_{k_3k_4} \Omega^{31}_{k_7k_8k_9k_5} \Omega^{04}_{k_7k_8k_9k_6}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_6k_7k_8k_9}} \tag{1139}$$

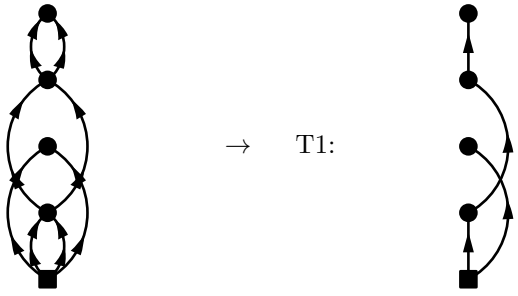


$$\text{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1140}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon_{k_3k_4}$$
$$a_3 = \epsilon^{k_7k_8k_9}_{k_5}$$
$$a_4 = \epsilon_{k_6k_7k_8k_9}$$

Diagram 564:

$$\text{PO4.564} = \lim_{\tau\to\infty} \frac{(-1)^4}{(2!)^4} \sum_{k_i} O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{02}_{k_3k_4} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{02}_{k_7k_8} \int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}_{k_1k_2}}e^{-\tau_2\epsilon_{k_3k_4}}e^{-\tau}$$
$$= \frac{(-1)^4}{(2!)^4} \sum_{k_i} \frac{O^{40}_{k_1k_2k_3k_4} \Omega^{22}_{k_5k_6k_1k_2} \Omega^{02}_{k_3k_4} \Omega^{22}_{k_7k_8k_5k_6} \Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2}\ \epsilon_{k_3k_4}\ \epsilon_{k_5k_6}\ \epsilon_{k_7k_8}} \tag{1141}$$

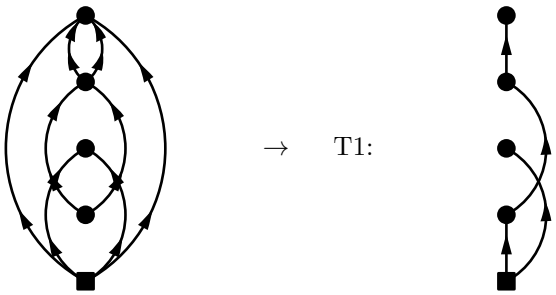


$$\mathrm{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1142}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon_{k_3k_4}$$
$$a_3 = \epsilon^{k_7k_8}_{k_5k_6}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 565:

$$\mathrm{PO4.565} = \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^4}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_1k_2}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{04}_{k_7k_8k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_3-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}}e^{-\tau_2\epsilon_{k_1k_2}}e^{-\tau}$$
$$= \frac{(-1)^4}{(2!)^4}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{02}_{k_1k_2}\Omega^{22}_{k_7k_8k_5k_6}\Omega^{04}_{k_7k_8k_3k_4}}{\epsilon_{k_3k_4}\ \epsilon_{k_1k_2}\ \epsilon_{k_5k_6k_3k_4}\ \epsilon_{k_3k_4k_7k_8}} \tag{1143}$$



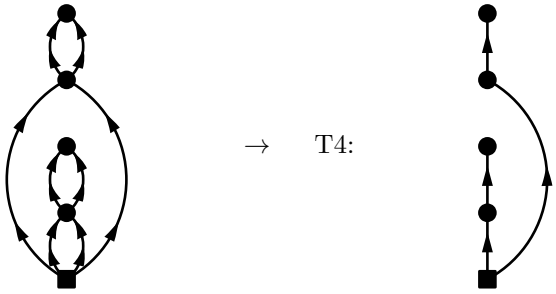
$\rightarrow$ T1:

$$\mathrm{T1} = \frac{1}{(a_1+a_3+a_4)a_2(a_3+a_4)a_4} \tag{1144}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_2}$$
$$a_3 = \epsilon^{k_7k_8}_{k_5k_6}$$
$$a_4 = \epsilon_{k_3k_4k_7k_8}$$

Diagram 566:

$$\mathrm{PO4.566} = \lim_{\tau\to\infty}\frac{(-1)^4}{2(2!)^4}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{02}_{k_5k_6}\Omega^{22}_{k_7k_8k_3k_4}\Omega^{02}_{k_7k_8}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}_{k_1k_2}}e^{-\tau_2\epsilon_{k_5k_6}}e^{-\tau}$$
$$= \frac{(-1)^4}{2(2!)^4}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{02}_{k_5k_6}\Omega^{22}_{k_7k_8k_3k_4}\Omega^{02}_{k_7k_8}}{\epsilon_{k_1k_2}\ \epsilon_{k_5k_6}\ \epsilon_{k_3k_4}\ \epsilon_{k_7k_8}} \tag{1145}$$



$\rightarrow$ T4:

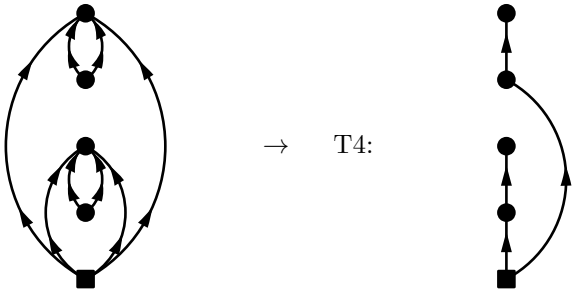
$$\mathrm{T4} = \frac{1}{(a_1+a_2)a_2(a_3+a_4)a_4} \tag{1146}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon_{k_5k_6}$$
$$a_3 = \epsilon^{k_7k_8}_{k_3k_4}$$
$$a_4 = \epsilon_{k_7k_8}$$

Diagram 567:

$$\text{PO4.567} = \lim_{\tau\to\infty}\frac{(-1)^4}{2(2!)^4}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_6k_1k_2}\Omega^{20}_{k_7k_8}\Omega^{04}_{k_7k_8k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}}e^{-\tau_2\epsilon_{k_1k_2k_5k_6}}$$

$$= \frac{(-1)^4}{2(2!)^4}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{20}_{k_5k_6}\Omega^{04}_{k_5k_6k_1k_2}\Omega^{20}_{k_7k_8}\Omega^{04}_{k_7k_8k_3k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_1k_2k_5k_6}\ \epsilon_{k_3k_4}\ \epsilon_{k_3k_4k_7k_8}} \tag{1147}$$



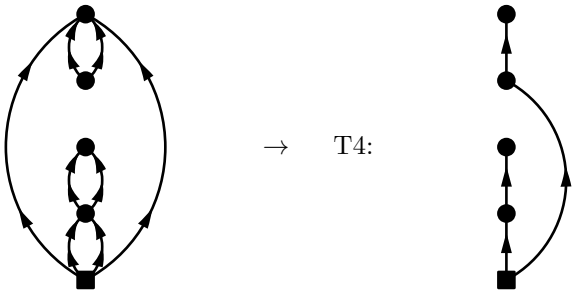
$$\text{T4} = \frac{1}{(a_1+a_2)a_2(a_3+a_4)a_4} \tag{1148}$$

$$a_1 = \epsilon^{k_5k_6}$$
$$a_2 = \epsilon_{k_1k_2k_5k_6}$$
$$a_3 = \epsilon^{k_7k_8}$$
$$a_4 = \epsilon_{k_3k_4k_7k_8}$$

Diagram 568:

$$\text{PO4.568} = \lim_{\tau\to\infty}\frac{(-1)^4}{(2!)^4}\sum_{k_i} O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{02}_{k_5k_6}\Omega^{20}_{k_7k_8}\Omega^{04}_{k_7k_8k_3k_4}\int_0^\tau \mathrm{d}\tau_1\mathrm{d}\tau_2\mathrm{d}\tau_3\mathrm{d}\tau_4\theta(\tau_2-\tau_1)\theta(\tau_4-\tau_3)e^{-\tau_1\epsilon^{k_5k_6}_{k_1k_2}}e^{-\tau_2\epsilon_{k_5k_6}}e^{-\tau}$$

$$= \frac{(-1)^4}{(2!)^4}\sum_{k_i}\frac{O^{40}_{k_1k_2k_3k_4}\Omega^{22}_{k_5k_6k_1k_2}\Omega^{02}_{k_5k_6}\Omega^{20}_{k_7k_8}\Omega^{04}_{k_7k_8k_3k_4}}{\epsilon_{k_1k_2}\ \epsilon_{k_5k_6}\ \epsilon_{k_3k_4}\ \epsilon_{k_3k_4k_7k_8}} \tag{1149}$$



$$\text{T4} = \frac{1}{(a_1+a_2)a_2(a_3+a_4)a_4} \tag{1150}$$

$$a_1 = \epsilon^{k_5k_6}_{k_1k_2}$$
$$a_2 = \epsilon_{k_5k_6}$$
$$a_3 = \epsilon^{k_7k_8}$$
$$a_4 = \epsilon_{k_3k_4k_7k_8}$$