

embedding 1 [1, -2, -1, -2] with multiplicity 2

initial

Denominator:

0

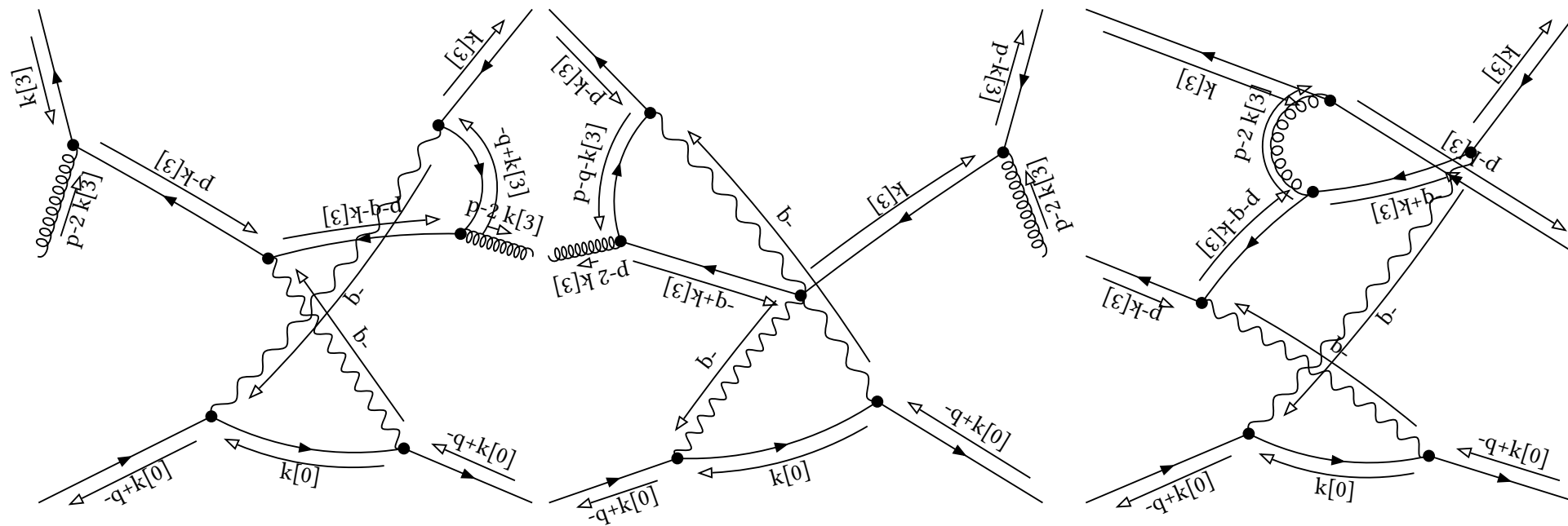
Partial Fractioned Denominator:

0

final

Denominator:

$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, p-k[3]]^{-1} \text{prop}[0, p-2k[3]]^{-1} \text{prop}[0, -q+k[3]]^{-1} \text{prop}[0, p-q-k[3]]^{-1}$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:-2,=-2 \quad 9:1,12:-2,16:0,=-1 \quad 10:0,12:-2,14:0,16:0,=-2$$

$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:-2,12:0,=-2 \quad 9:-1,12:0,16:0,=-1 \quad 10:-2,12:0,14:0,16:0,=-2$$

$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:-1,12:-1,=-2 \quad 9:0,12:-1,16:0,=-1 \quad 10:-1,12:-1,14:0,16:0,=-2$$

embedding 2 [1, -1, -2, -1] with multiplicity 2

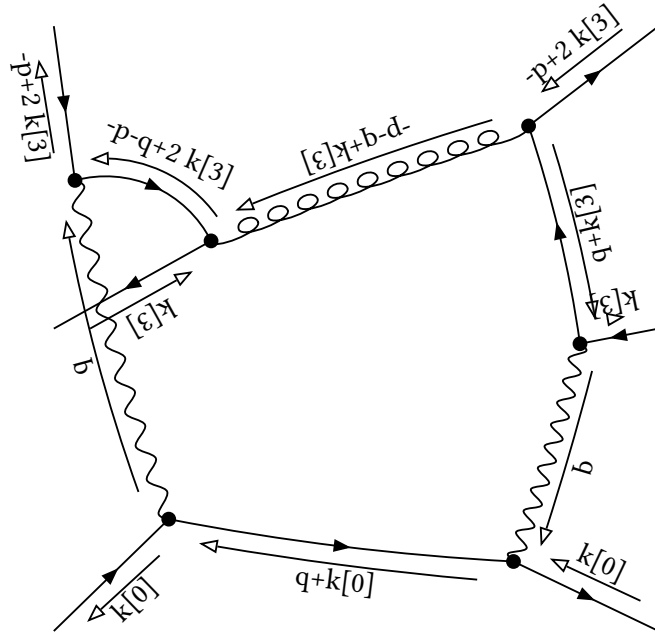
initial

Denominator:

$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{prop}[0, -p-q+k[3]]^{-1} \text{prop}[0, -p-q+2 k[3]]^{-1}$$

Partial Fractioned Denominator:

$$\begin{aligned} & \frac{1}{2} (\text{dot}[p, q] + \frac{3}{2} \text{dot}[q, q])^{-1} (\frac{1}{2} \text{dot}[p, p] + \text{dot}[p, q] + \frac{1}{2} \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \\ & - \frac{1}{2} (\text{dot}[p, q] + \frac{3}{2} \text{dot}[q, q])^{-1} (\frac{1}{2} \text{dot}[p, p] + \text{dot}[p, q] + \frac{1}{2} \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-q+2 k[3]]^{-1} \\ & + (\text{dot}[p, q] + \frac{3}{2} \text{dot}[q, q])^{-1} (\frac{1}{2} \text{dot}[p, p] + \text{dot}[p, q] + \frac{1}{2} \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{prop}[0, -p-q+2 k[3]]^{-1} \\ & - (\text{dot}[p, q] + \frac{3}{2} \text{dot}[q, q])^{-1} (\frac{1}{2} \text{dot}[p, p] + \text{dot}[p, q] + \frac{1}{2} \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{prop}[0, -p-q+2 k[3]]^{-1} \\ & - \frac{1}{2} (\frac{1}{2} \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} (\frac{1}{2} \text{dot}[p, p] + \text{dot}[p, q] + \frac{1}{2} \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \\ & + \frac{1}{4} (\frac{1}{2} \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} (\frac{1}{2} \text{dot}[p, p] + \text{dot}[p, q] + \frac{1}{2} \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-q+k[3]]^{-1} \\ & - \frac{1}{2} (\frac{1}{2} \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} (\frac{1}{2} \text{dot}[p, p] + \text{dot}[p, q] + \frac{1}{2} \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{prop}[0, -p-q+2 k[3]]^{-1} \\ & + (\frac{1}{2} \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} (\frac{1}{2} \text{dot}[p, p] + \text{dot}[p, q] + \frac{1}{2} \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{prop}[0, -p-q+2 k[3]]^{-1} \\ & - \frac{1}{2} (\frac{1}{2} \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} (\frac{1}{2} \text{dot}[p, p] + \text{dot}[p, q] + \frac{1}{2} \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-q+k[3]]^{-1} \text{prop}[0, -p-q+2 k[3]]^{-1} \\ & + (\frac{1}{2} \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} (\frac{1}{2} \text{dot}[p, p] + \text{dot}[p, q] + \frac{1}{2} \text{dot}[q, q])^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{prop}[0, -p-q+k[3]]^{-1} \text{prop}[0, -p-q+2 k[3]]^{-1} \end{aligned}$$

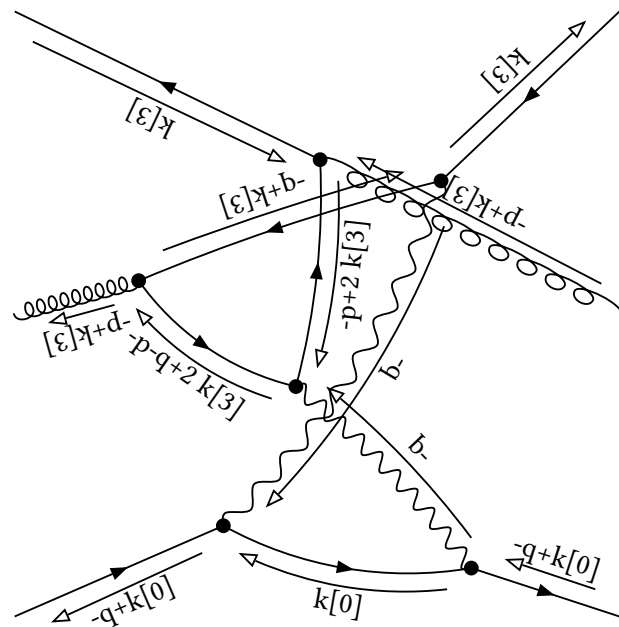


0:0,2:1,=1 2:1,4:0,6:0,10:0,12:-2,=-1 9:0,12:
-2,16:0,=-2 10:0,12:-2,14:1,16:0,=-1

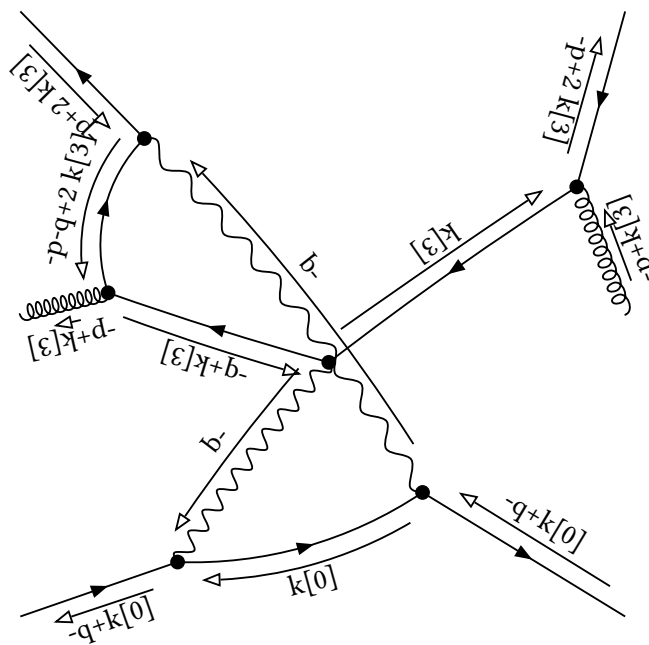
final

Denominator:

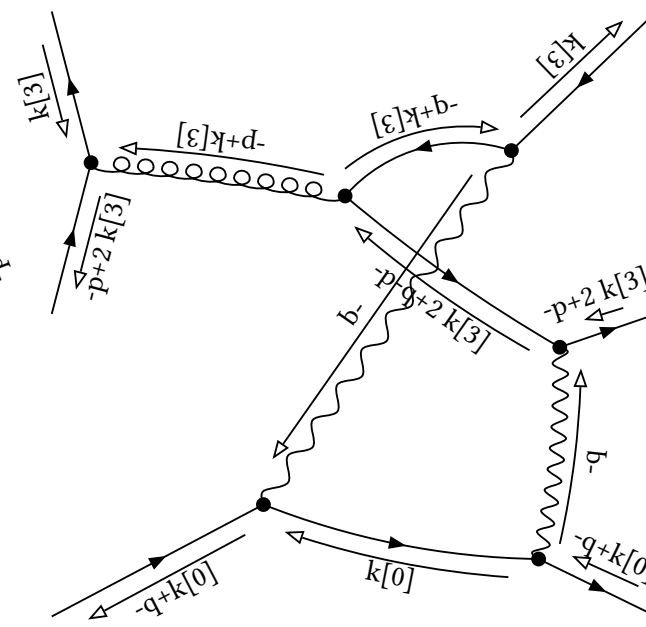
$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, -p+k[3]]^{-1} \text{prop}[0, -q+k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{prop}[0, -p-q+2 k[3]]^{-1}$$



$$0:1,2:0,=1 \ 2:0,4:0,6:0,10:0,12:-1,=-1 \ 9:-1,12:-1,16:0,=-2 \ 10:0,12:-1,14:0,16:0,=-1$$



$$0:1,2:0,=1 \ 2:0,4:0,6:0,10:-1,12:0,=-1 \ 9:-2,12:0,16:0,=-2 \ 10:-1,12:0,14:0,16:0,=-1$$



$$0:1,2:0,=1 \ 2:0,4:0,6:0,10:1,12:-2,=-1 \ 9:0,12:-2,16:0,=-2 \ 10:1,12:-2,14:0,16:0,=-1$$

embedding 3 [1, -1, -1, -2] with multiplicity 2

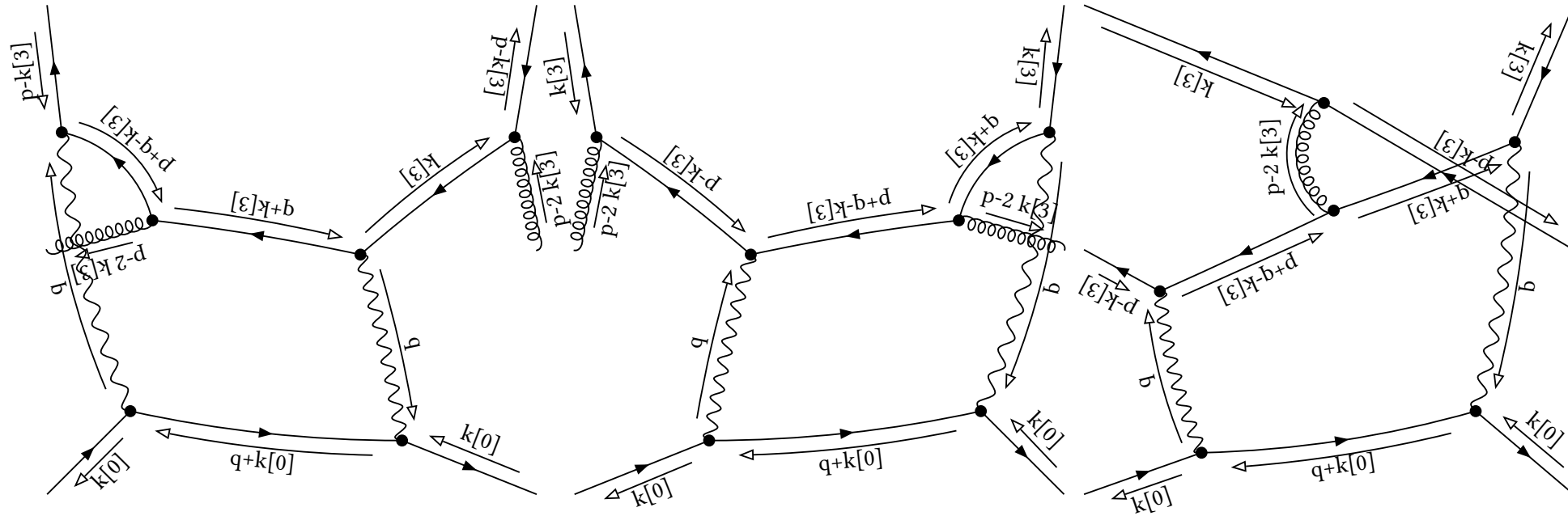
initial

Denominator:

$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p-k[3]]^{-1} \text{prop}[0, p-2 k[3]]^{-1} \text{prop}[0, p+q-k[3]]^{-1}$$

Partial Fractioned Denominator:

$$\begin{aligned} & -(2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p-k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & + (2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p+q-k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & - (2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, p-k[3]]^{-1} \text{prop}[0, p+q-k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & + (2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p-k[3]]^{-1} \text{prop}[0, p+q-k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & + 2 (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p-2 k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & - (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p+q-k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & + 2 (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, p-2 k[3]]^{-1} \text{prop}[0, p+q-k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & + 2 (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p-k[3]]^{-1} \text{prop}[0, p-2 k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & - (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p-k[3]]^{-1} \text{prop}[0, p+q-k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & + 2 (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, p-k[3]]^{-1} \text{prop}[0, p-2 k[3]]^{-1} \text{prop}[0, p+q-k[3]]^{-1} \text{dot}[p, p]^{-1} \end{aligned}$$



$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:-2,12:0,=-1 \quad 9: \\ & -1,12:0,16:0,=-1 \quad 10:-2,12:0,14:0,16:0,=-2 \end{aligned}$$

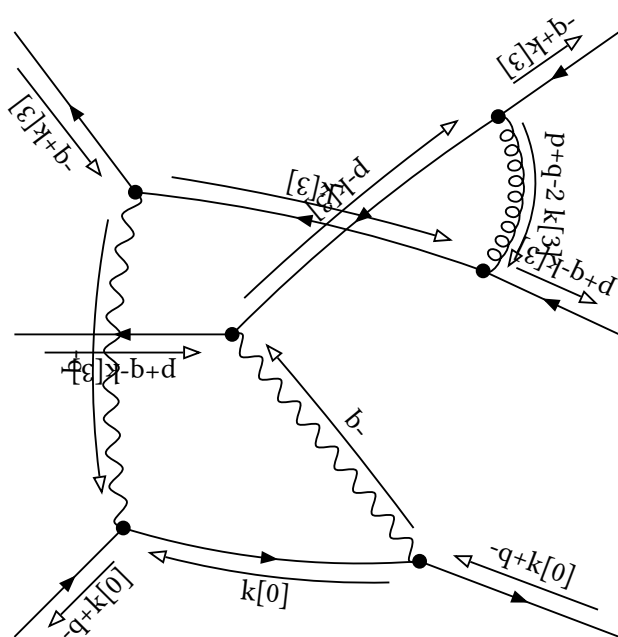
$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:0,12:-2,=-1 \quad 9:1,12: \\ & -2,16:0,=-1 \quad 10:0,12:-2,14:0,16:0,=-2 \end{aligned}$$

$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:-1,12:-1,=-1 \quad 9:0,12: \\ & -1,16:0,=-1 \quad 10:-1,12:-1,14:0,16:0,=-2 \end{aligned}$$

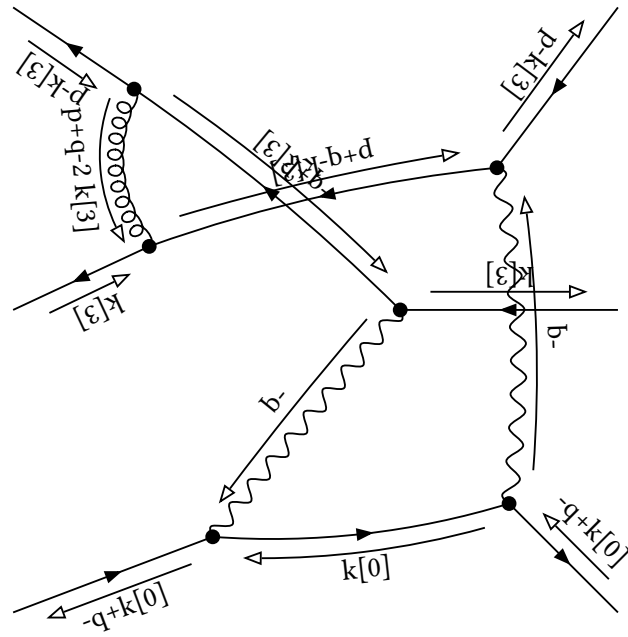
final

Denominator:

$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, p-k[3]]^{-1} \text{prop}[0, -q+k[3]]^{-1} \text{prop}[0, p+q-k[3]]^{-1} \text{prop}[0, p+q-2 k[3]]^{-1}$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:-1,12:0,=-1 \quad 9:0,12:0,16:-1,=-1 \quad 10:-1,12:0,14:0,16:-1,=-2$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:-1,=-1 \quad 9:0,12:-1,16:0,=-1 \quad 10:0,12:-1,14:-1,16:0,=-2$$

embedding 4 [1, -1, -1, -1] with multiplicity 2

initial

Denominator:

0

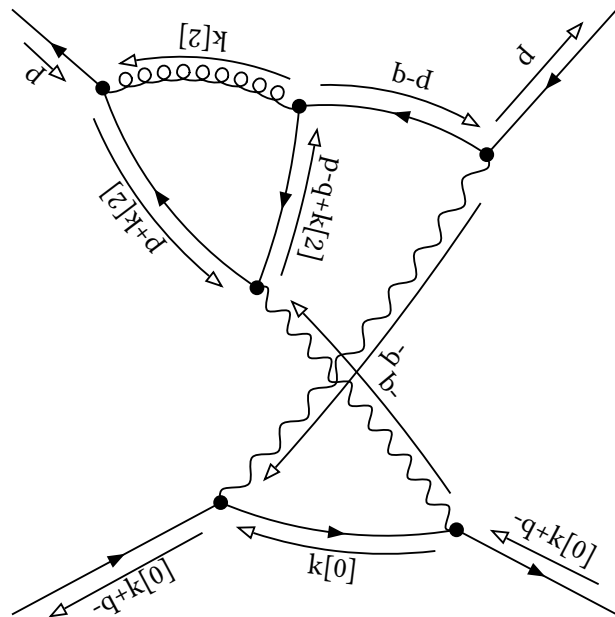
Partial Fractioned Denominator:

0

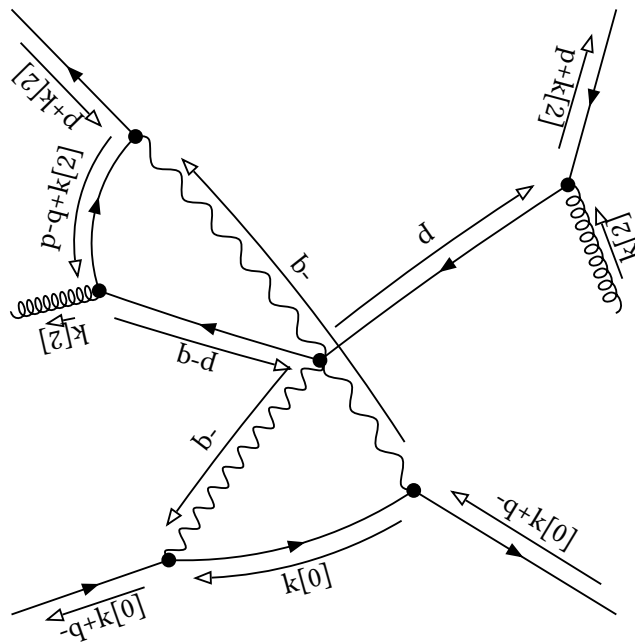
final

Denominator:

$$\text{prop}[0,p]^{-1} \text{prop}[0,k[2]]^{-1} \text{prop}[0,p+k[2]]^{-1} \text{prop}[0,p-q]^{-1} \text{prop}[0,p-q+k[2]]^{-1}$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:-1,=-1 \quad 9:0,12:-1,16:0,=-1 \quad 10:0,12:-1,14:0,16:0,=-1$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:-1,12:0,=-1 \quad 9:-1,12:0,16:0,=-1 \quad 10:-1,12:0,14:0,16:0,=-1$$

embedding 5 [1, -1, -1, 0] with multiplicity 2

initial

Denominator:

0

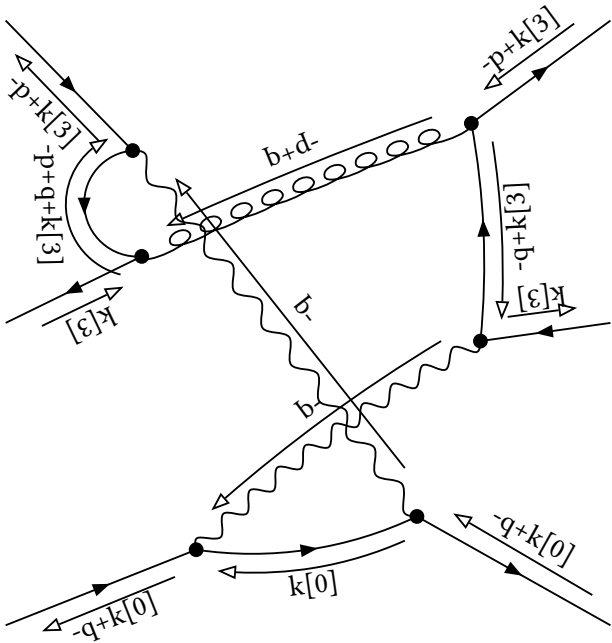
Partial Fractioned Denominator:

0

final

Denominator:

$\text{prop}[0,k[3]]^{-1} \text{prop}[0,-p+q]^{-1} \text{prop}[0,-p+k[3]]^{-1} \text{prop}[0,-q+k[3]]^{-1} \text{prop}[0,-p+q+k[3]]^{-1}$



$0:1,2:0,=1 \ 2:0,4:0,6:0,10:0,12:-1,=-1 \ 9:0,12:-1,16:0,=-1 \ 10:0,12:-1,14:1,16:0,=0$

embedding 6 $[1, -1, 0, -1]$ with multiplicity 2

initial

Denominator:

0

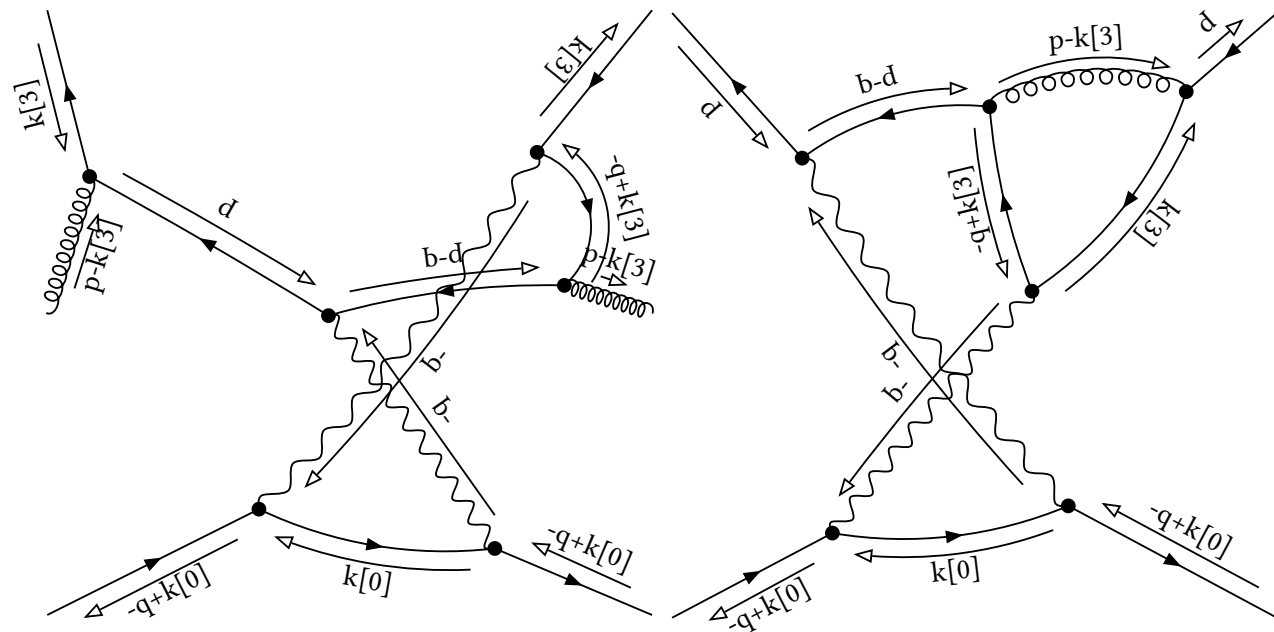
Partial Fractioned Denominator:

0

final

Denominator:

$$\text{prop}[0,p]^{-1} \text{prop}[0,k[3]]^{-1} \text{prop}[0,p-q]^{-1} \text{prop}[0,p-k[3]]^{-1} \text{prop}[0,-q+k[3]]^{-1}$$



0:1,2:0,=1 2:0,4:0,6:0,10:0,12:-1,=-1 9:1,12:
-1,16:0,=0 10:0,12:-1,14:0,16:0,=-1

0:1,2:0,=1 2:0,4:0,6:0,10:-1,12:0,=-1 9:0,12:0,16:0,=0
10:-1,12:0,14:0,16:0,=-1

embedding 7 [1, -1, 1, -1] with multiplicity 2

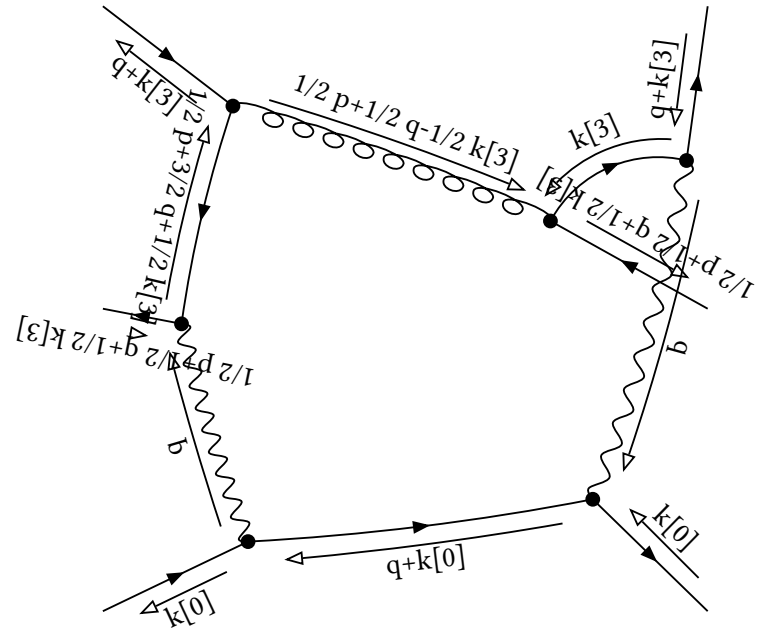
initial

Denominator:

$$1/16 \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, 1/2 p+1/2 q+1/2 k[3]]^{-1} \text{prop}[0, 1/2 p+1/2 q-1/2 k[3]]^{-1} \text{prop}[0, 1/2 p+3/2 q+1/2 k[3]]^{-1}$$

Partial Fractioned Denominator:

$$\begin{aligned} & 1/4 (-2 \text{dot}[p, q] - 3 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, 1/2 p+1/2 q+1/2 k[3]]^{-1} \\ & -1/4 (-2 \text{dot}[p, q] - 3 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, 1/2 p+3/2 q+1/2 k[3]]^{-1} \\ & -1/8 (-2 \text{dot}[p, q] - 3 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, 1/2 p+1/2 q+1/2 k[3]]^{-1} \text{prop}[0, 1/2 p+3/2 q+1/2 k[3]]^{-1} \\ & +1/8 (-2 \text{dot}[p, q] - 3 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, 1/2 p+1/2 q+1/2 k[3]]^{-1} \text{prop}[0, 1/2 p+3/2 q+1/2 k[3]]^{-1} \\ & +1/4 (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, 1/2 p+1/2 q-1/2 k[3]]^{-1} \\ & +1/4 (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, 1/2 p+3/2 q+1/2 k[3]]^{-1} \\ & -1/8 (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, 1/2 p+1/2 q-1/2 k[3]]^{-1} \text{prop}[0, 1/2 p+3/2 q+1/2 k[3]]^{-1} \\ & -1/8 (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, 1/2 p+1/2 q+1/2 k[3]]^{-1} \text{prop}[0, 1/2 p+3/2 q+1/2 k[3]]^{-1} \\ & +1/16 (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, 1/2 p+1/2 q+1/2 k[3]]^{-1} \text{prop}[0, 1/2 p+1/2 q-1/2 k[3]]^{-1} \text{prop}[0, 1/2 p+3/2 q+1/2 k[3]]^{-1} \end{aligned}$$



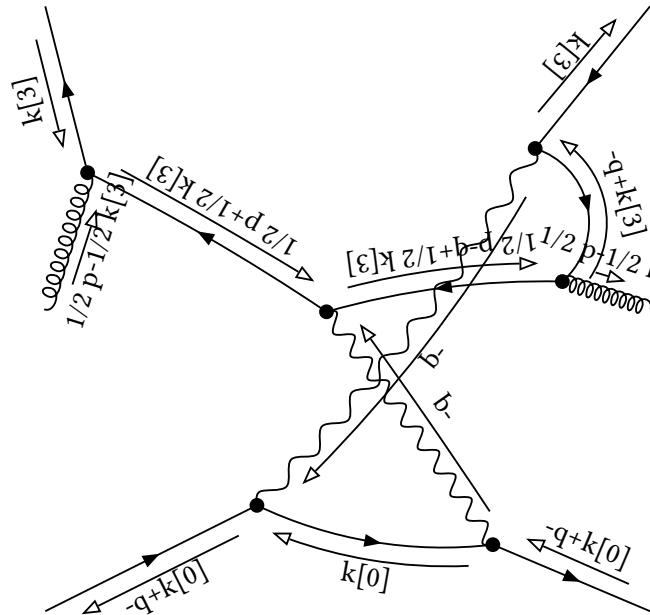
$$0:0,2:1,=1 \quad 2:1,4:0,6:0,10:-2,12:0,=-1 \quad 9:0,12:0,16:1,=1$$

$$10:-2,12:0,14:0,16:1,=-1$$

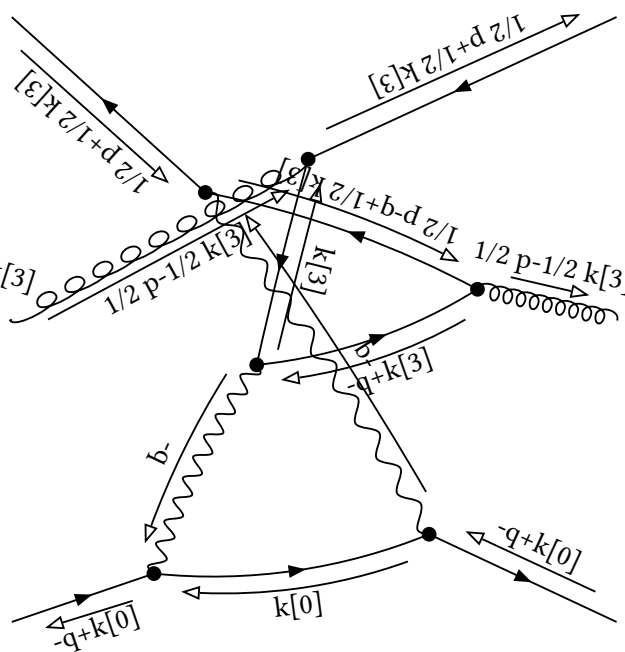
final

Denominator:

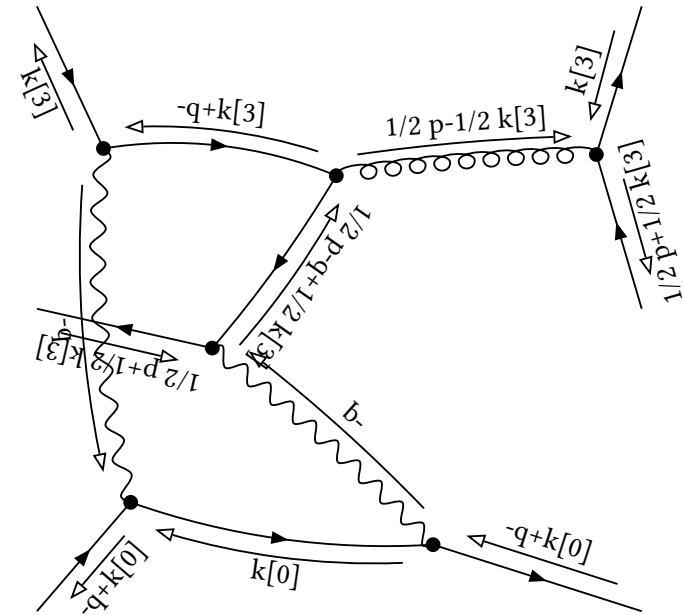
$$1/16 \text{ prop}[0,k[3]]^{-1} \text{ prop}[0,-q+k[3]]^{-1} \text{ prop}[0,1/2 p+1/2 k[3]]^{-1} \text{ prop}[0,1/2 p-1/2 k[3]]^{-1} \text{ prop}[0,1/2 p-q+1/2 k[3]]^{-1}$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:-1,=-1 \quad 9:2,12:-1,16:0,=1 \quad 10:0,12:-1,14:0,16:0,=-1$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:-1,12:0,=-1 \quad 9:1,12:0,16:0,=1 \quad 10:-1,12:0,14:0,16:0,=-1$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:-2,12:1,=-1 \quad 9:0,12:1,16:0,=1 \quad 10:-2,12:1,14:0,16:0,=-1$$

embedding 8 [1, -1, 1, 0] with multiplicity 2

initial

Denominator:

0

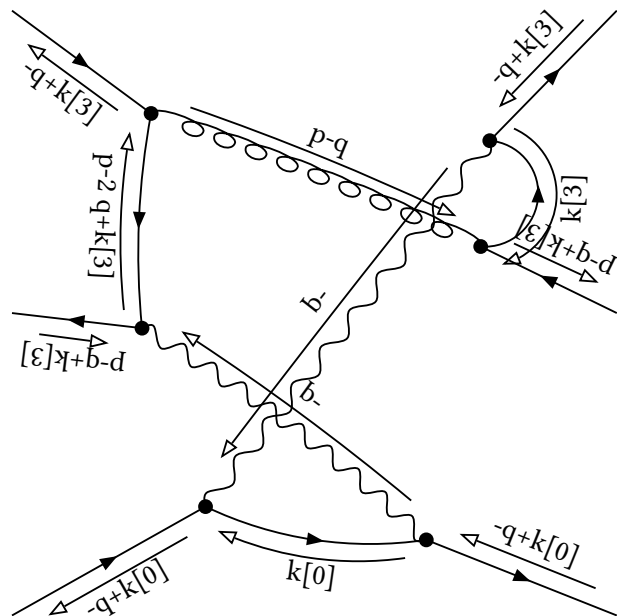
Partial Fractioned Denominator:

0

final

Denominator:

$$\text{prop}[0,k[3]]^{-1} \text{prop}[0,p-q]^{-1} \text{prop}[0,-q+k[3]]^{-1} \text{prop}[0,p-q+k[3]]^{-1} \text{prop}[0,p-2 \ q+k[3]]^{-1}$$



$$\begin{aligned} 0:1,2:0,=1 \quad 2:0,4:0,6:0,10:-1,12:0,=-1 \quad 9:0,12:0,16:1,=1 \\ 10:-1,12:0,14:0,16:1,=0 \end{aligned}$$

embedding 9 [1, 0, -2, -1] with multiplicity 2

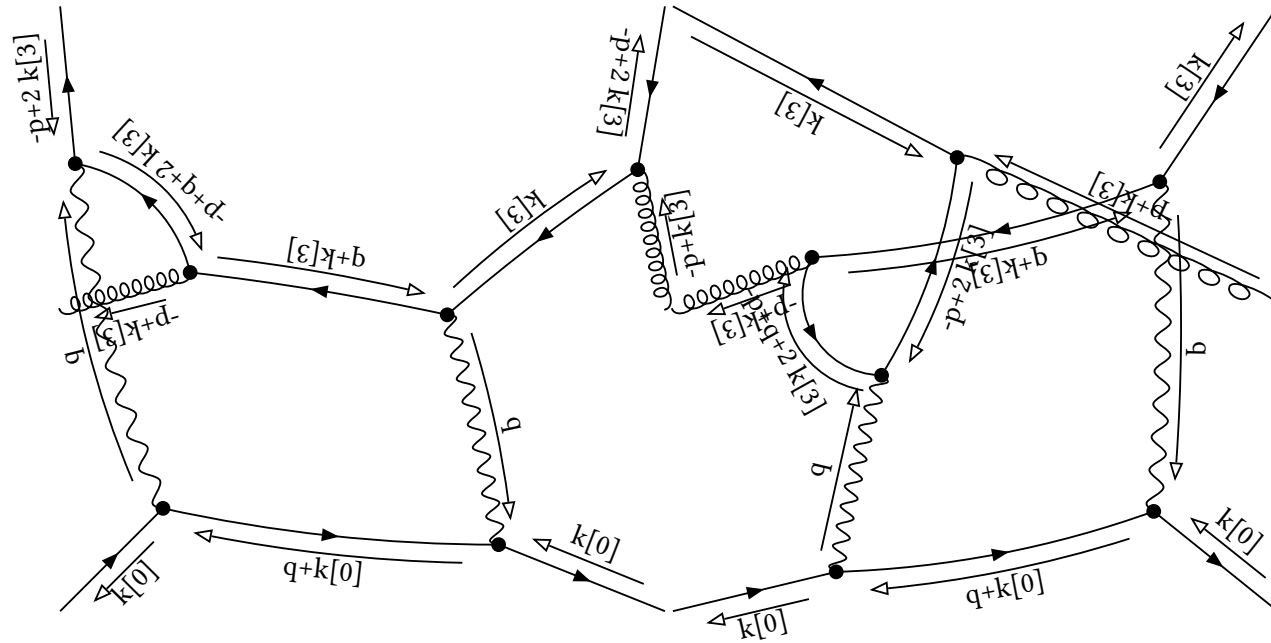
initial

Denominator:

$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{prop}[0, -p+q+2 k[3]]^{-1}$$

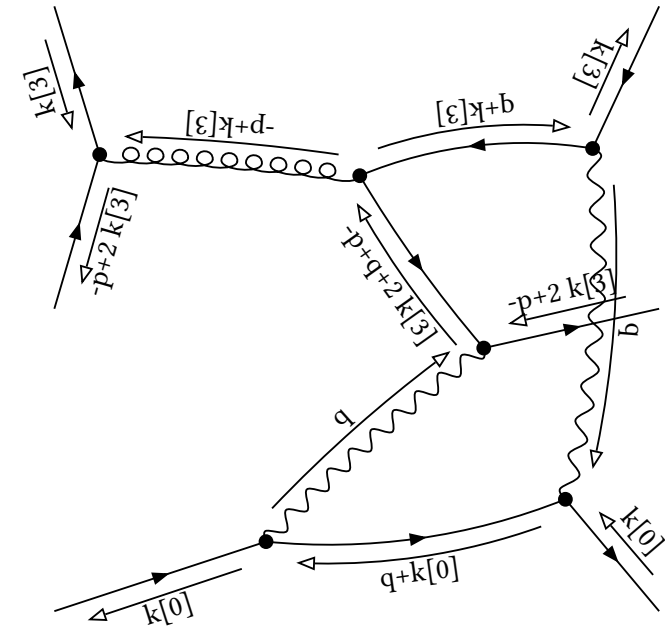
Partial Fractioned Denominator:

$$\begin{aligned} & -(\text{dot}[p, q] + 1/2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & +(\text{dot}[p, q] + 1/2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+q+2 k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & +2 (\text{dot}[p, q] + 1/2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{prop}[0, -p+q+2 k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & -2 (\text{dot}[p, q] + 1/2 \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{prop}[0, -p+q+2 k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & +1/2 (1/2 \text{dot}[p, p] + \text{dot}[p, q] + 1/2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & - (1/2 \text{dot}[p, p] + \text{dot}[p, q] + 1/2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+q+2 k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & - (1/2 \text{dot}[p, p] + \text{dot}[p, q] + 1/2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, -p+k[3]]^{-1} \text{prop}[0, -p+q+2 k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & - (1/2 \text{dot}[p, p] + \text{dot}[p, q] + 1/2 \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & +2 (1/2 \text{dot}[p, p] + \text{dot}[p, q] + 1/2 \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{prop}[0, -p+q+2 k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & +2 (1/2 \text{dot}[p, p] + \text{dot}[p, q] + 1/2 \text{dot}[q, q])^{-1} \text{prop}[0, -p+k[3]]^{-1} \text{prop}[0, -p+2 k[3]]^{-1} \text{prop}[0, -p+q+2 k[3]]^{-1} \text{dot}[p, p]^{-1} \end{aligned}$$



$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:-1,12:0,=0 \quad 9: \\ & -2,12:0,16:0,=-2 \quad 10:-1,12:0,14:0,16:0,=-1 \end{aligned}$$

$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:0,12:-1,=0 \quad 9:-1,12: \\ & -1,16:0,=-2 \quad 10:0,12:-1,14:0,16:0,=-1 \end{aligned}$$

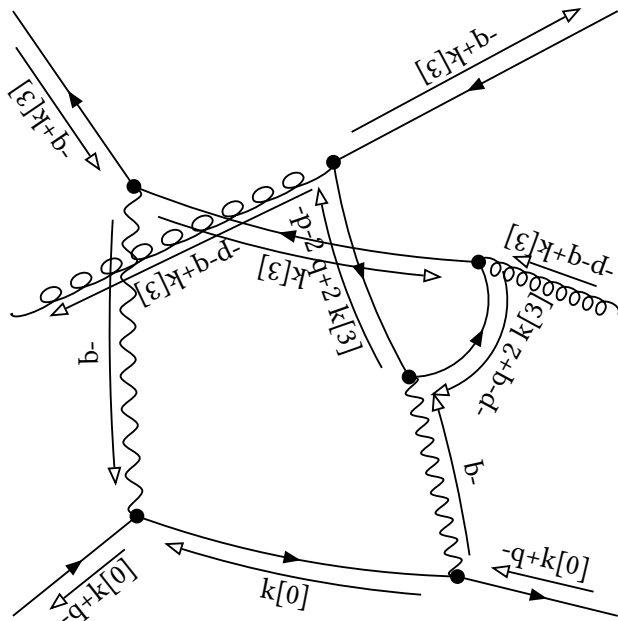


$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:1,12:-2,=0 \quad 9:0,12: \\ & -2,16:0,=-2 \quad 10:1,12:-2,14:0,16:0,=-1 \end{aligned}$$

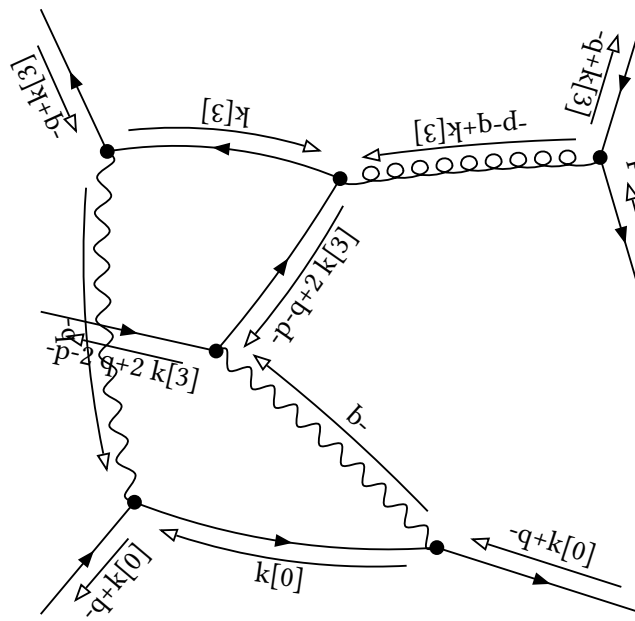
final

Denominator:

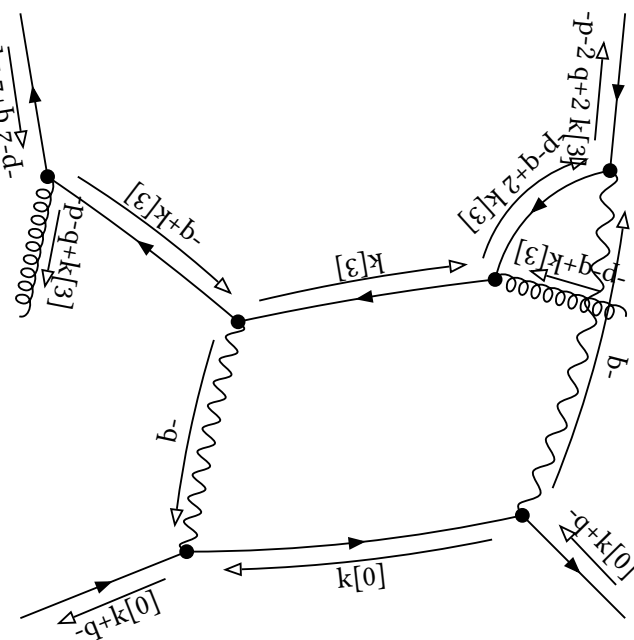
$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, -q+k[3]]^{-1} \text{prop}[0, -p-q+k[3]]^{-1} \text{prop}[0, -p-q+2 k[3]]^{-1} \text{prop}[0, -p-2 q+2 k[3]]^{-1}$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:-1,12:0,16:-1,-=-2 \quad 10:0,12:0,14:0,16:-1,-=-1$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:0,12:0,16:-2,-=-2 \quad 10:0,12:0,14:1,16:-2,-=-1$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:-2,12:0,16:0,-=-2 \quad 10:0,12:0,14:-1,16:0,-=-1$$

embedding 10 $[1, 0, -1, -1]$ with multiplicity 2

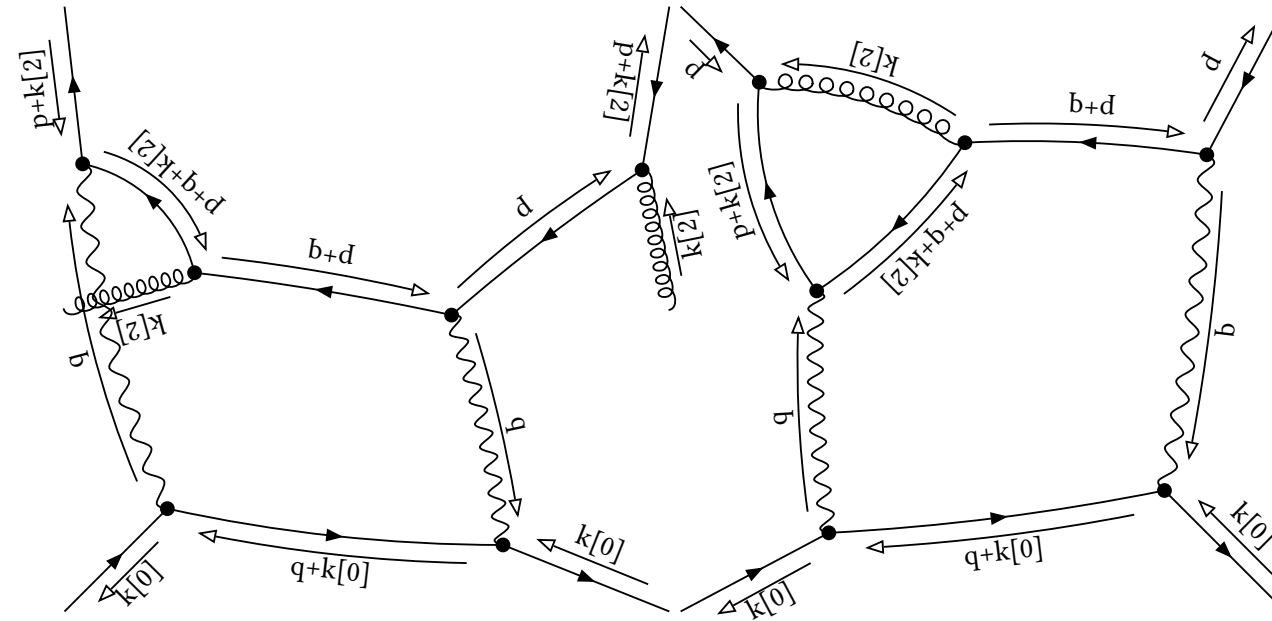
initial

Denominator:

$$\text{prop}[0,p]^{-1} \text{prop}[0,k[2]]^{-1} \text{prop}[0,p+q]^{-1} \text{prop}[0,p+k[2]]^{-1} \text{prop}[0,p+q+k[2]]^{-1}$$

Partial Fractioned Denominator:

$$(\text{dot}[p,p]+2 \text{ dot}[p,q]+\text{dot}[q,q])^{-1} \text{prop}[\theta,k[2]]^{-1} \text{prop}[\theta,p+k[2]]^{-1} \text{prop}[\theta,p+q+k[2]]^{-1} \text{dot}[p,p]^{-1}$$



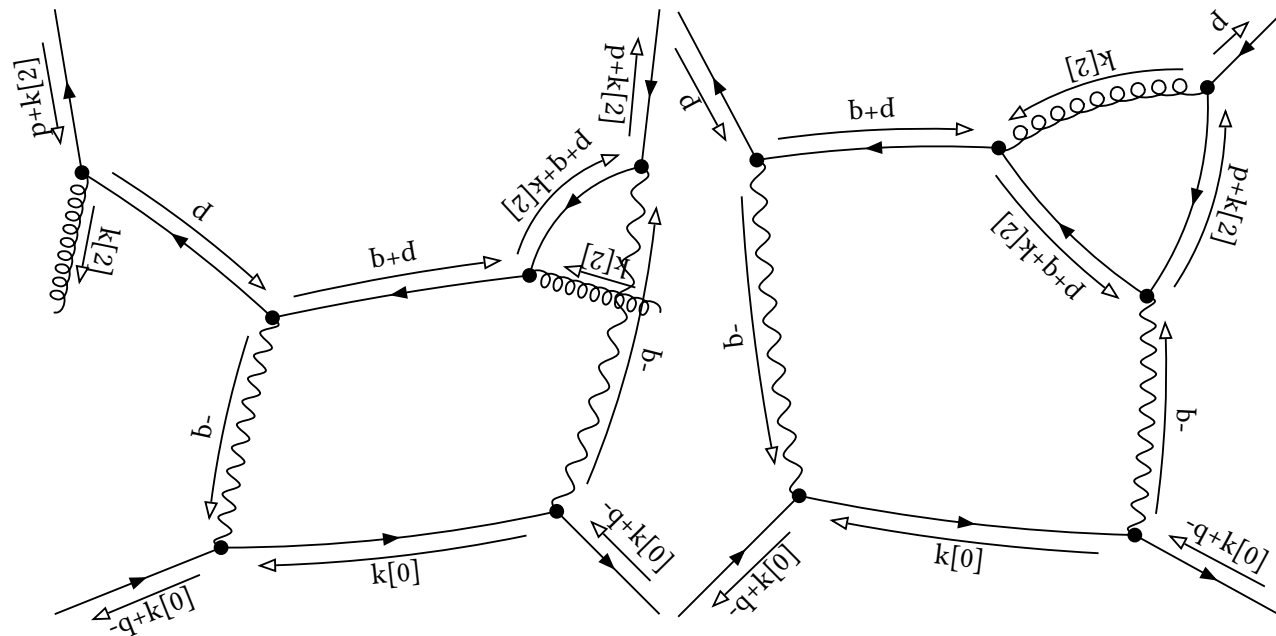
$$\begin{aligned} 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:-1,12:0,=0 \quad 9: \\ -1,12:0,16:0,=-1 \quad 10:-1,12:0,14:0,16:0,=-1 \end{aligned}$$

$$\begin{aligned} 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:0,12:-1,=0 \quad 9:0,12:-1,16:0,=-1 \\ 10:0,12:-1,14:0,16:0,=-1 \end{aligned}$$

final

Denominator:

$\text{prop}[\theta, p]^{-1} \text{prop}[\theta, k[2]]^{-1} \text{prop}[\theta, p+q]^{-1} \text{prop}[\theta, p+k[2]]^{-1} \text{prop}[\theta, p+q+k[2]]^{-1}$



0:1,2:0,=1 2:0,4:0,6:0,10:0,12:0,=0 9:-1,12:0,16:0,=-1
10:0,12:0,14:-1,16:0,=-1

0:1,2:0,=1 2:0,4:0,6:0,10:0,12:0,=0 9:0,12:0,16:-1,=-1
10:0,12:0,14:0,16:-1,=-1

embedding 11 [1, 0, -1, 0] with multiplicity 2

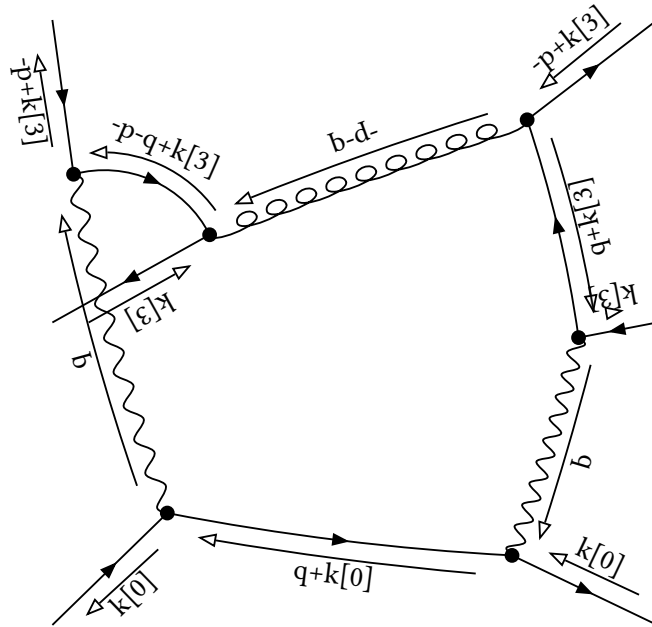
initial

Denominator:

$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+k[3]]^{-1} \text{prop}[0, -p-q]^{-1} \text{prop}[0, -p-q+k[3]]^{-1}$$

Partial Fractioned Denominator:

$$\begin{aligned} & (2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} (\text{dot}[p, p] + 2 \text{dot}[p, q] + \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+k[3]]^{-1} \\ & - (2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} (\text{dot}[p, p] + 2 \text{dot}[p, q] + \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-q+k[3]]^{-1} \\ & + (2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} (\text{dot}[p, p] + 2 \text{dot}[p, q] + \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, -p+k[3]]^{-1} \text{prop}[0, -p-q+k[3]]^{-1} \\ & - (2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} (\text{dot}[p, p] + 2 \text{dot}[p, q] + \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p+k[3]]^{-1} \text{prop}[0, -p-q+k[3]]^{-1} \end{aligned}$$

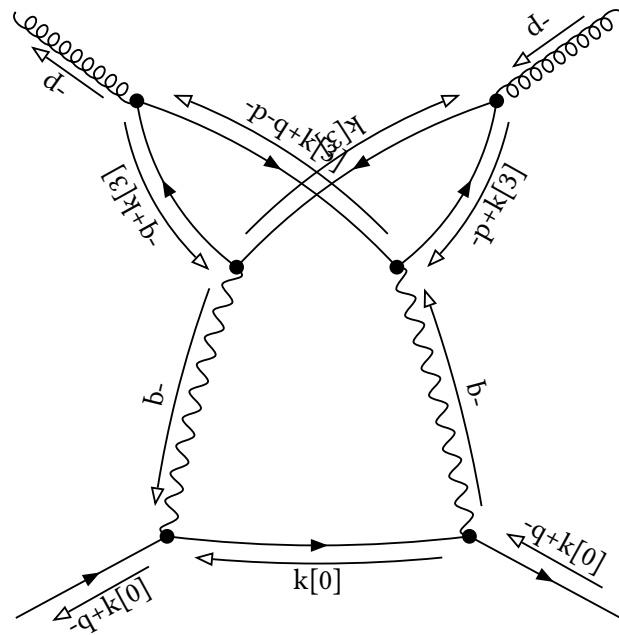


$$\begin{aligned} & 0:0,2:1,=1 \ 2:1,4:0,6:0,10:0,12:-1,=0 \ 9:0,12: \\ & -1,16:0,=-1 \ 10:0,12:-1,14:1,16:0,=0 \end{aligned}$$

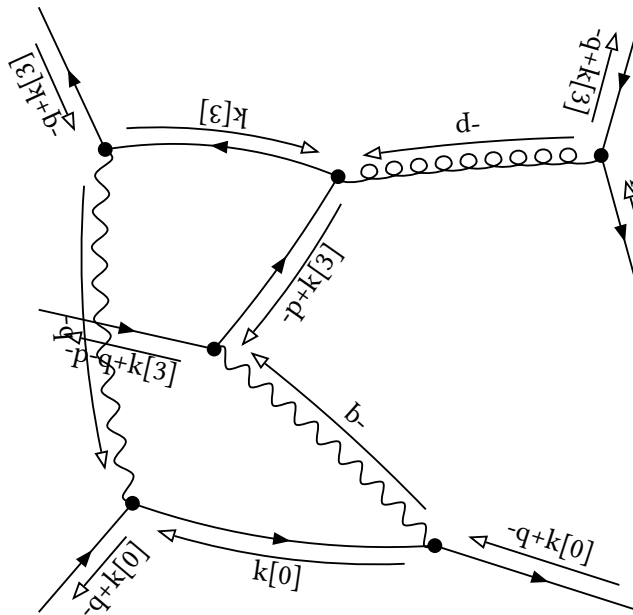
final

Denominator:

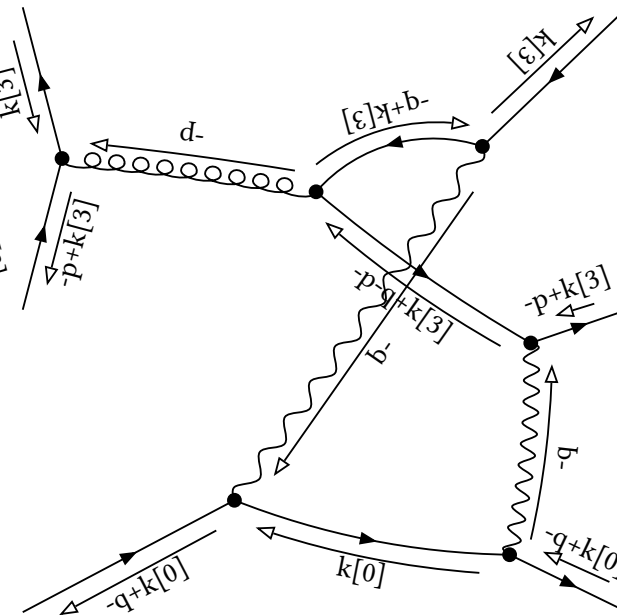
$$\text{prop}[0,k[3]]^{-1} \text{prop}[0,-p]^{-1} \text{prop}[0,-p+k[3]]^{-1} \text{prop}[0,-q+k[3]]^{-1} \text{prop}[0,-p-q+k[3]]^{-1}$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:-1,12:0,16:0,=-1 \\ 10:0,12:0,14:0,16:0,=0$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:0,12:0,16:-1,=-1 \\ 10:0,12:0,14:1,16:-1,=0$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:1,12:-1,=0 \quad 9:0,12:-1,16:0,=-1 \quad 10:1,12:-1,14:0,16:0,=0$$

embedding 12 [1, 0, -1, 1] with multiplicity 2

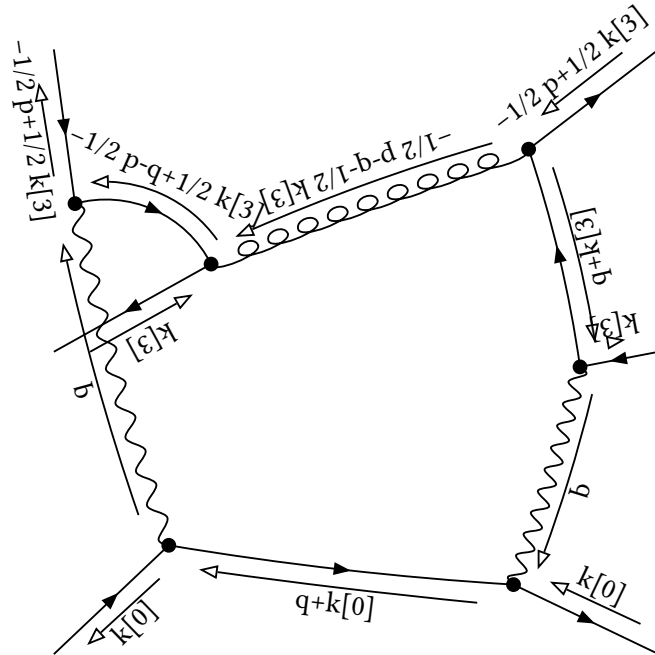
initial

Denominator:

$$1/16 \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -1/2 p+1/2 k[3]]^{-1} \text{prop}[0, -1/2 p-q+1/2 k[3]]^{-1} \text{prop}[0, -1/2 p-q-1/2 k[3]]^{-1}$$

Partial Fractioned Denominator:

$$\begin{aligned} & -1/4 (2 \text{dot}[p, q] + 3 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -1/2 p+1/2 k[3]]^{-1} \\ & +1/4 (2 \text{dot}[p, q] + 3 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -1/2 p-q+1/2 k[3]]^{-1} \\ & -1/8 (2 \text{dot}[p, q] + 3 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, -1/2 p+1/2 k[3]]^{-1} \text{prop}[0, -1/2 p-q+1/2 k[3]]^{-1} \\ & +1/8 (2 \text{dot}[p, q] + 3 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -1/2 p+1/2 k[3]]^{-1} \text{prop}[0, -1/2 p-q+1/2 k[3]]^{-1} \\ & +1/4 (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -1/2 p+1/2 k[3]]^{-1} \\ & +1/4 (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -1/2 p-q-1/2 k[3]]^{-1} \\ & -1/8 (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, -1/2 p+1/2 k[3]]^{-1} \text{prop}[0, -1/2 p-q-1/2 k[3]]^{-1} \\ & -1/8 (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -1/2 p+1/2 k[3]]^{-1} \text{prop}[0, -1/2 p-q+1/2 k[3]]^{-1} \\ & -1/8 (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -1/2 p-q+1/2 k[3]]^{-1} \text{prop}[0, -1/2 p-q-1/2 k[3]]^{-1} \\ & +1/16 (-\text{dot}[p, p] - 4 \text{dot}[p, q] - 4 \text{dot}[q, q])^{-1} (-\text{dot}[p, p] - 2 \text{dot}[p, q] - \text{dot}[q, q])^{-1} \text{prop}[0, -1/2 p+1/2 k[3]]^{-1} \text{prop}[0, -1/2 p-q+1/2 k[3]]^{-1} \\ & \text{prop}[0, -1/2 p-q-1/2 k[3]]^{-1} \end{aligned}$$

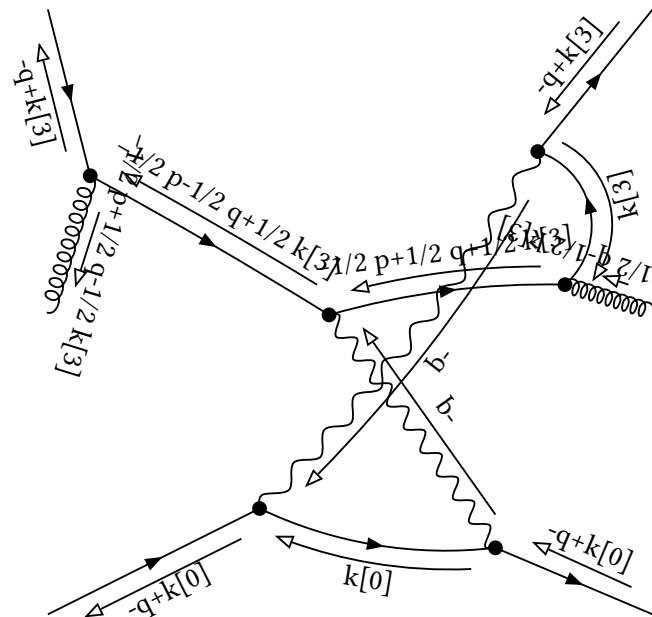


$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:0,12:-1,=0 \quad 9:0,12: \\ & -1,16:0,=-1 \quad 10:0,12:-1,14:2,16:0,=1 \end{aligned}$$

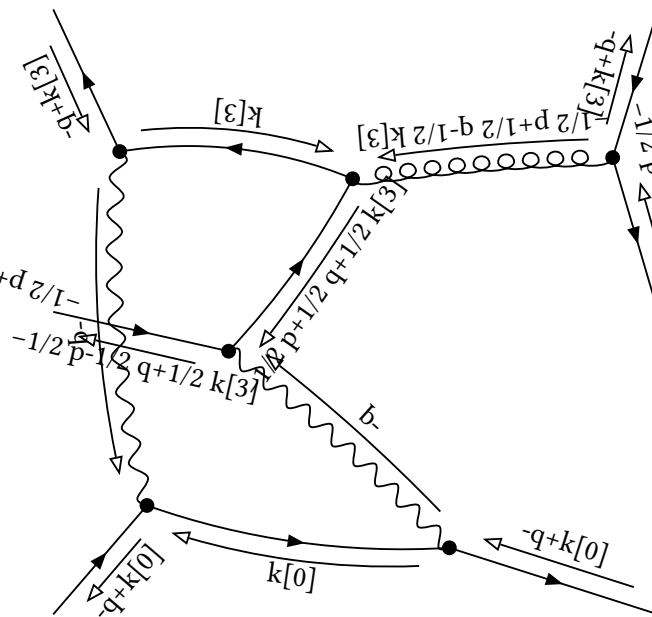
final

Denominator:

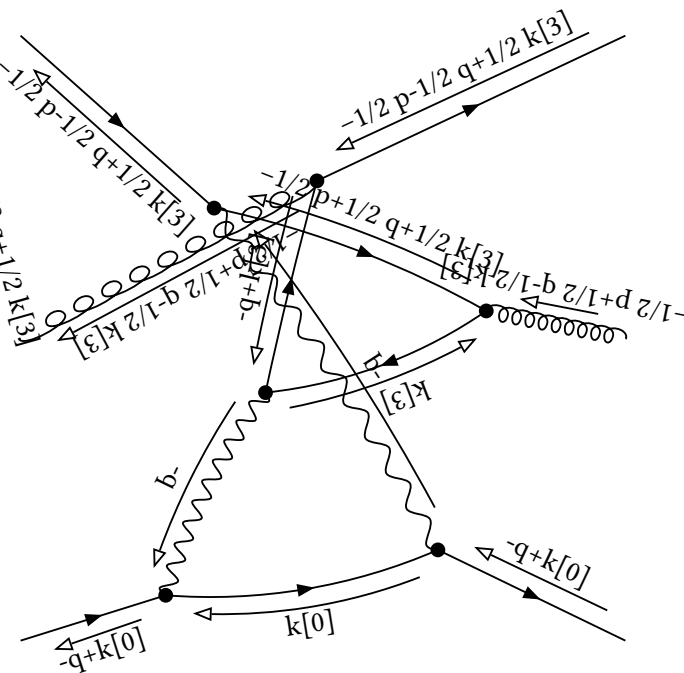
$$1/16 \text{ prop}[0, k[3]]^{-1} \text{ prop}[0, -q+k[3]]^{-1} \text{ prop}[0, -1/2 p+1/2 q+1/2 k[3]]^{-1} \text{ prop}[0, -1/2 p+1/2 q-1/2 k[3]]^{-1} \text{ prop}[0, -1/2 p-1/2 q+1/2 k[3]]^{-1}$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:-2,12:0,16:1,=-1 \\ 10:0,12:0,14:0,16:1,=1$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:0,12:0,16:-1,=-1 \\ 10:0,12:0,14:2,16:-1,=1$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:-1,12:0,16:0,=-1 \\ 10:0,12:0,14:1,16:0,=1$$

embedding 13 [1, 0, 0, 1] with multiplicity 2

initial

Denominator:

0

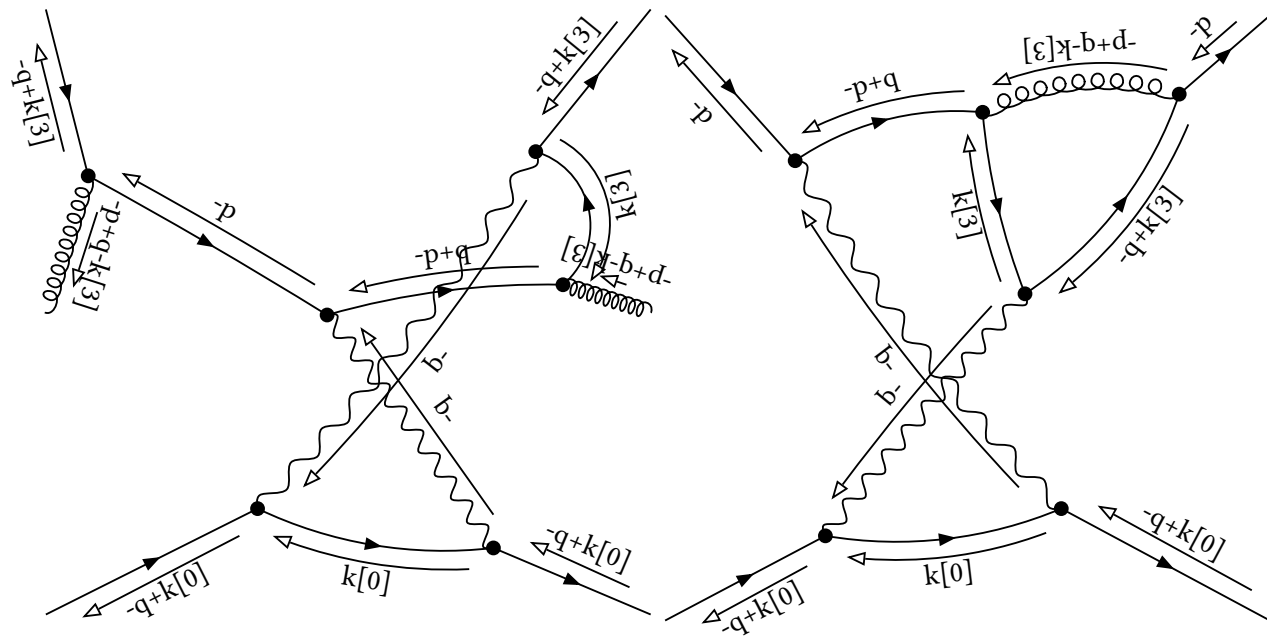
Partial Fractioned Denominator:

0

final

Denominator:

$$\text{prop}[0,k[3]]^{-1} \text{prop}[0,-p]^{-1} \text{prop}[0,-p+q]^{-1} \text{prop}[0,-q+k[3]]^{-1} \text{prop}[0,-p+q-k[3]]^{-1}$$



$$\begin{aligned} 0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:-1,12:0,16:1,=0 \\ 10:0,12:0,14:0,16:1,=1 \end{aligned}$$

$$\begin{aligned} 0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:0,12:0,16:0,=0 \\ 10:0,12:0,14:1,16:0,=1 \end{aligned}$$

embedding 14 [1, 0, 1, 0] with multiplicity 2

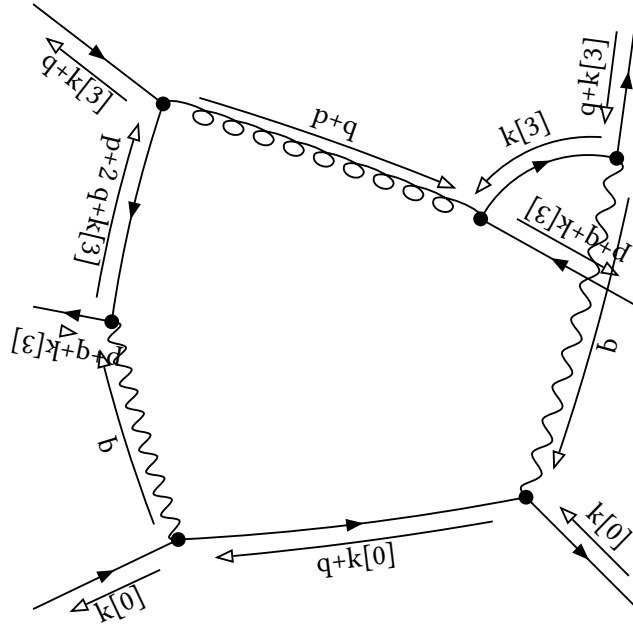
initial

Denominator:

$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, p+q]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p+q+k[3]]^{-1} \text{prop}[0, p+2 \ q+k[3]]^{-1}$$

Partial Fractioned Denominator:

$$\begin{aligned} & -(-2 \text{dot}[p, q] - 2 \text{dot}[q, q])^{-1} (\text{dot}[p, p] + 2 \text{dot}[p, q] + \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p+q+k[3]]^{-1} \\ & + (-2 \text{dot}[p, q] - 2 \text{dot}[q, q])^{-1} (\text{dot}[p, p] + 2 \text{dot}[p, q] + \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p+2 \ q+k[3]]^{-1} \\ & + (-2 \text{dot}[p, q] - 2 \text{dot}[q, q])^{-1} (\text{dot}[p, p] + 2 \text{dot}[p, q] + \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, p+q+k[3]]^{-1} \text{prop}[0, p+2 \ q+k[3]]^{-1} \\ & - (-2 \text{dot}[p, q] - 2 \text{dot}[q, q])^{-1} (\text{dot}[p, p] + 2 \text{dot}[p, q] + \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p+q+k[3]]^{-1} \text{prop}[0, p+2 \ q+k[3]]^{-1} \end{aligned}$$



$$0:0,2:1,=1 \ 2:1,4:0,6:0,10:-1,12:0,=0 \ 9:0,12:0,16:1,=1$$

$$10:-1,12:0,14:0,16:1,=0$$

Denominator:

$$\begin{aligned} 0:1, 2:0, &=1 \quad 2:0, 4:0, 6:0, 10:-1, 12:1, =0 \quad 9:0, 12:1, 16:0, =1 \\ 10:-1, 12:1, 14:0, 16:0, &=0 \end{aligned}$$

embedding 15 [1, 0, 1, 1] with multiplicity 2

initial

Denominator:

0

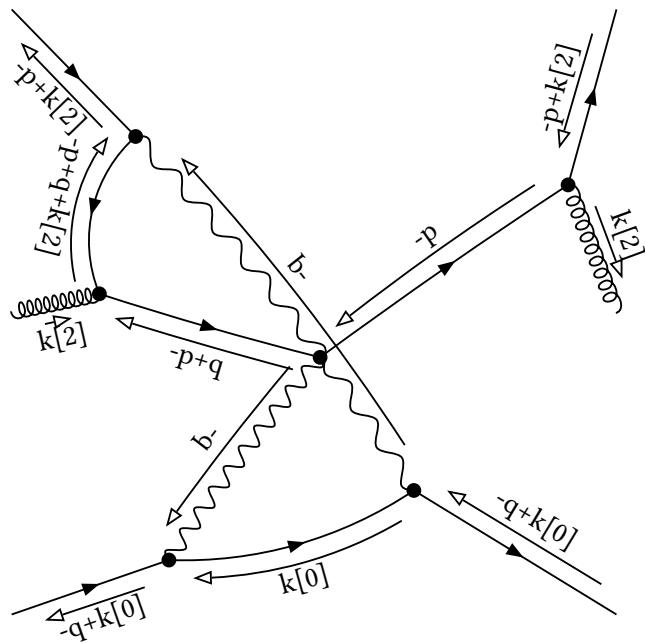
Partial Fractioned Denominator:

0

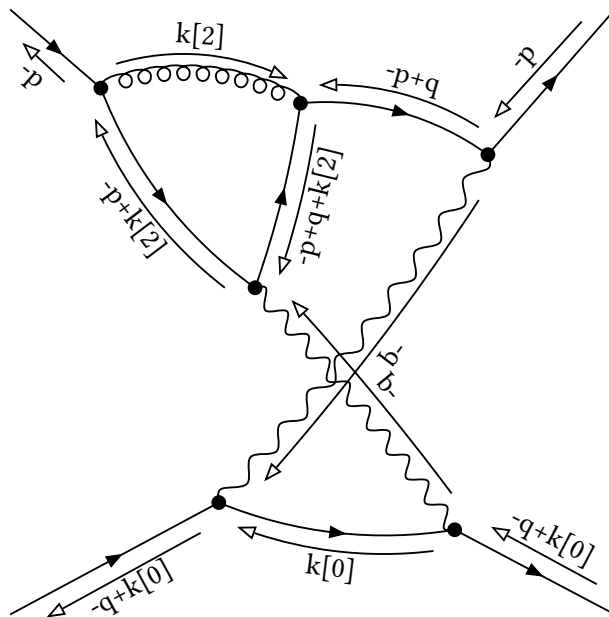
final

Denominator:

$$\text{prop}[0, k[2]]^{-1} \text{prop}[0, -p]^{-1} \text{prop}[0, -p+q]^{-1} \text{prop}[0, -p+k[2]]^{-1} \text{prop}[0, -p+q+k[2]]^{-1}$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:1,12:0,16:0,=1 \\ 10:0,12:0,14:1,16:0,=1$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:0,12:0,16:1,=1 \\ 10:0,12:0,14:0,16:1,=1$$

embedding 16 [1, 0, 1, 2] with multiplicity 2

initial

Denominator:

0

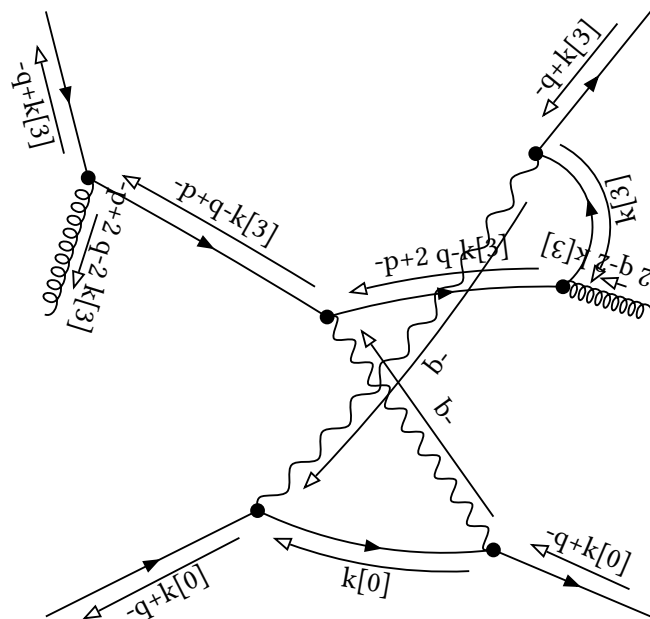
Partial Fractioned Denominator:

0

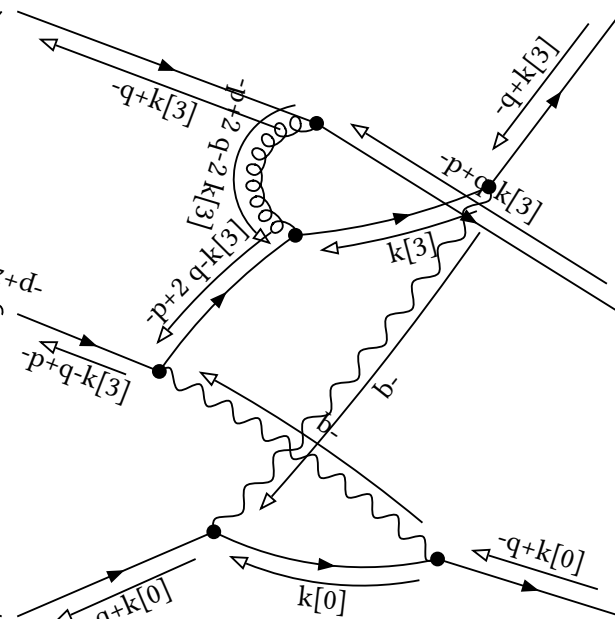
final

Denominator:

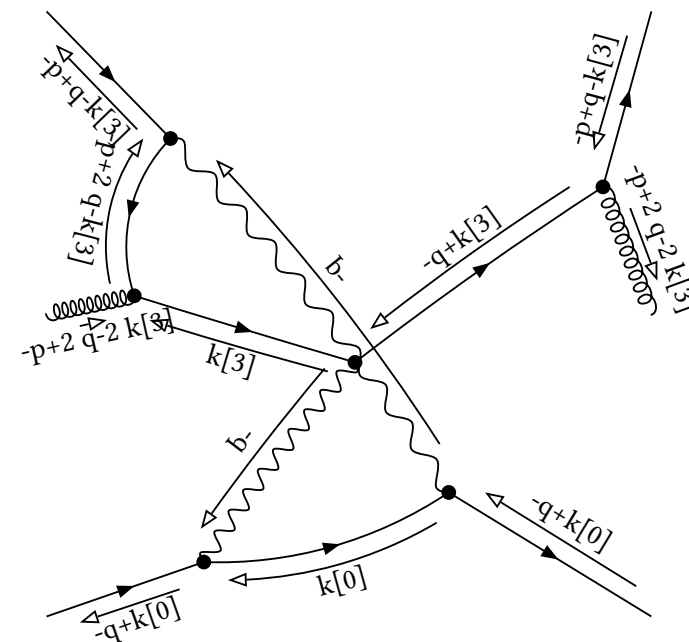
$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, -q+k[3]]^{-1} \text{prop}[0, -p+q-k[3]]^{-1} \text{prop}[0, -p+2 \ q-k[3]]^{-1} \text{prop}[0, -p+2 \ q-2 \ k[3]]^{-1}$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:-1,12:0,16:2,=1 \\ 10:0,12:0,14:0,16:2,=2$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:0,12:0,16:1,=1 \\ 10:0,12:0,14:1,16:1,=2$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:1,12:0,16:0,=1 \\ 10:0,12:0,14:2,16:0,=2$$

embedding 17 [1, 0, 2, 1] with multiplicity 2

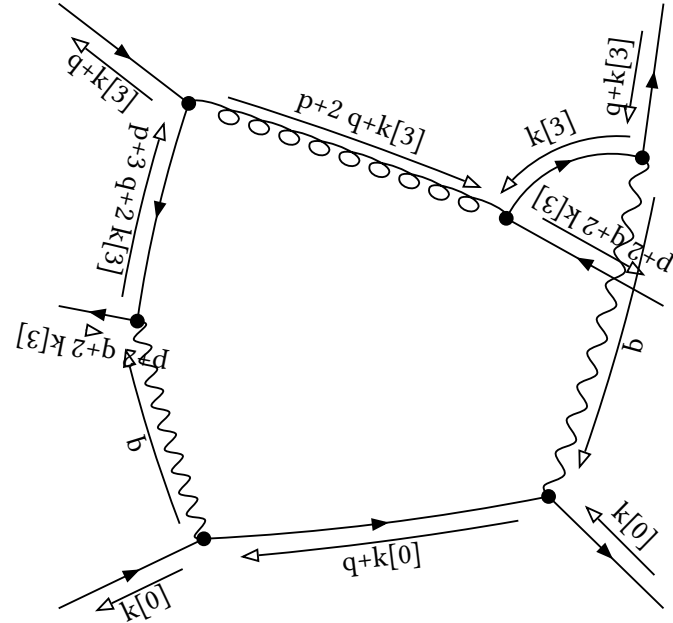
initial

Denominator:

$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, p+2 \ q+k[3]]^{-1} \text{prop}[0, p+2 \ q+2 \ k[3]]^{-1} \text{prop}[0, p+3 \ q+2 \ k[3]]^{-1}$$

Partial Fractioned Denominator:

$$\begin{aligned} & -1/2 \ (-\text{dot}[p, q] - 3/2 \ \text{dot}[q, q])^{-1} \ (1/2 \ \text{dot}[p, p] + 2 \ \text{dot}[p, q] + 2 \ \text{dot}[q, q])^{-1} \ \text{prop}[0, k[3]]^{-1} \ \text{prop}[0, q+k[3]]^{-1} \ \text{prop}[0, p+2 \ q+2 \ k[3]]^{-1} \\ & +1/2 \ (-\text{dot}[p, q] - 3/2 \ \text{dot}[q, q])^{-1} \ (1/2 \ \text{dot}[p, p] + 2 \ \text{dot}[p, q] + 2 \ \text{dot}[q, q])^{-1} \ \text{prop}[0, k[3]]^{-1} \ \text{prop}[0, q+k[3]]^{-1} \ \text{prop}[0, p+3 \ q+2 \ k[3]]^{-1} \\ & +(-\text{dot}[p, q] - 3/2 \ \text{dot}[q, q])^{-1} \ (1/2 \ \text{dot}[p, p] + 2 \ \text{dot}[p, q] + 2 \ \text{dot}[q, q])^{-1} \ \text{prop}[0, k[3]]^{-1} \ \text{prop}[0, p+2 \ q+2 \ k[3]]^{-1} \ \text{prop}[0, p+3 \ q+2 \ k[3]]^{-1} \\ & -(-\text{dot}[p, q] - 3/2 \ \text{dot}[q, q])^{-1} \ (1/2 \ \text{dot}[p, p] + 2 \ \text{dot}[p, q] + 2 \ \text{dot}[q, q])^{-1} \ \text{prop}[0, q+k[3]]^{-1} \ \text{prop}[0, p+2 \ q+2 \ k[3]]^{-1} \ \text{prop}[0, p+3 \ q+2 \ k[3]]^{-1} \\ & +1/4 \ (1/2 \ \text{dot}[p, p] + 2 \ \text{dot}[p, q] + 2 \ \text{dot}[q, q])^{-1} \ (1/2 \ \text{dot}[p, p] + \text{dot}[p, q] + 1/2 \ \text{dot}[q, q])^{-1} \ \text{prop}[0, k[3]]^{-1} \ \text{prop}[0, q+k[3]]^{-1} \ \text{prop}[0, p+2 \ q+k[3]]^{-1} \\ & -1/2 \ (1/2 \ \text{dot}[p, p] + 2 \ \text{dot}[p, q] + 2 \ \text{dot}[q, q])^{-1} \ (1/2 \ \text{dot}[p, p] + \text{dot}[p, q] + 1/2 \ \text{dot}[q, q])^{-1} \ \text{prop}[0, k[3]]^{-1} \ \text{prop}[0, q+k[3]]^{-1} \ \text{prop}[0, p+3 \ q+2 \ k[3]]^{-1} \\ & -1/2 \ (1/2 \ \text{dot}[p, p] + 2 \ \text{dot}[p, q] + 2 \ \text{dot}[q, q])^{-1} \ (1/2 \ \text{dot}[p, p] + \text{dot}[p, q] + 1/2 \ \text{dot}[q, q])^{-1} \ \text{prop}[0, k[3]]^{-1} \ \text{prop}[0, p+2 \ q+k[3]]^{-1} \ \text{prop}[0, p+3 \ q+2 \ k[3]]^{-1} \\ & -1/2 \ (1/2 \ \text{dot}[p, p] + 2 \ \text{dot}[p, q] + 2 \ \text{dot}[q, q])^{-1} \ (1/2 \ \text{dot}[p, p] + \text{dot}[p, q] + 1/2 \ \text{dot}[q, q])^{-1} \ \text{prop}[0, q+k[3]]^{-1} \ \text{prop}[0, p+2 \ q+k[3]]^{-1} \ \text{prop}[0, p+2 \ q+2 \ k[3]]^{-1} \\ & + (1/2 \ \text{dot}[p, p] + 2 \ \text{dot}[p, q] + 2 \ \text{dot}[q, q])^{-1} \ (1/2 \ \text{dot}[p, p] + \text{dot}[p, q] + 1/2 \ \text{dot}[q, q])^{-1} \ \text{prop}[0, q+k[3]]^{-1} \ \text{prop}[0, p+2 \ q+2 \ k[3]]^{-1} \ \text{prop}[0, p+3 \ q+2 \ k[3]]^{-1} \\ & + (1/2 \ \text{dot}[p, p] + 2 \ \text{dot}[p, q] + 2 \ \text{dot}[q, q])^{-1} \ (1/2 \ \text{dot}[p, p] + \text{dot}[p, q] + 1/2 \ \text{dot}[q, q])^{-1} \ \text{prop}[0, p+2 \ q+k[3]]^{-1} \ \text{prop}[0, p+2 \ q+2 \ k[3]]^{-1} \ \text{prop}[0, p+3 \ q+2 \ k[3]]^{-1} \end{aligned}$$



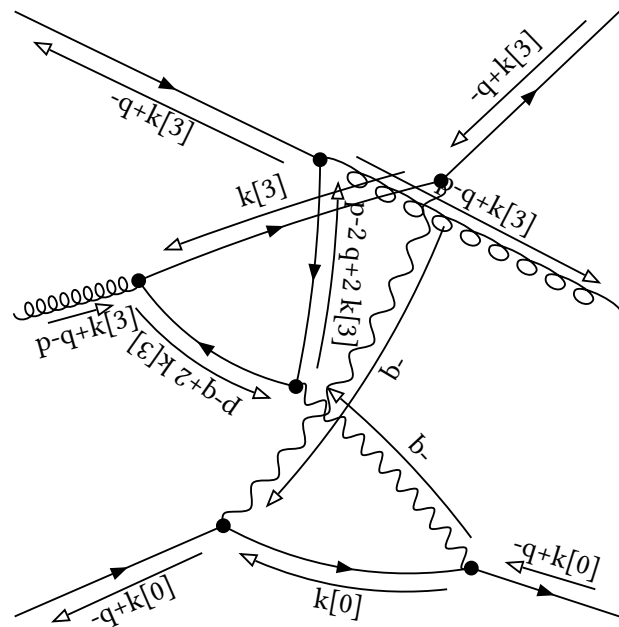
$$0:0,2:1,=1 \ 2:1,4:0,6:0,10:-1,12:0,=0 \ 9:0,12:0,16:2,=2$$

$$10:-1,12:0,14:0,16:2,=1$$

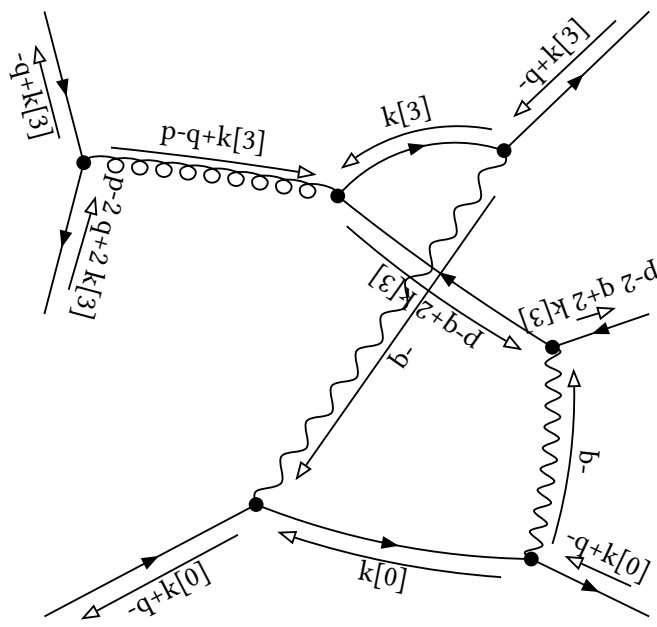
final

Denominator:

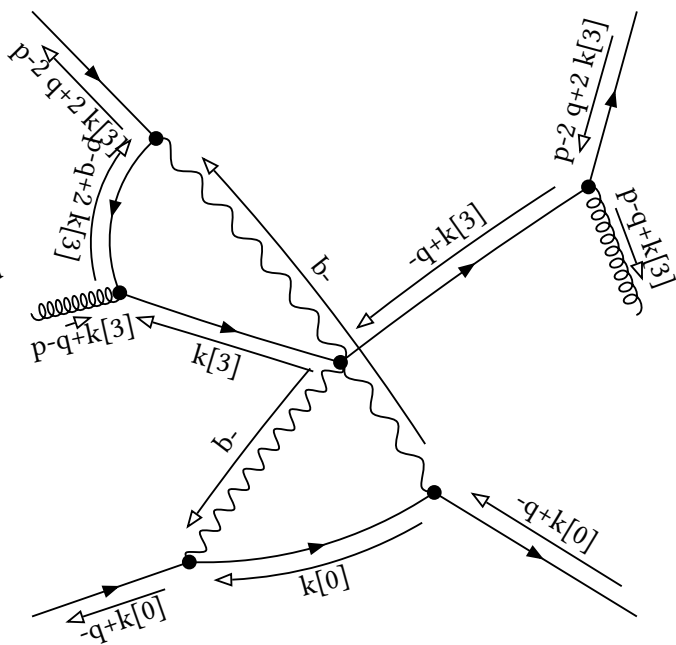
$$\text{prop}[0,k[3]]^{-1} \text{prop}[0,-q+k[3]]^{-1} \text{prop}[0,p-q+k[3]]^{-1} \text{prop}[0,p-q+2k[3]]^{-1} \text{prop}[0,p-2q+2k[3]]^{-1}$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:1,12:0,16:1,=2 \\ 10:0,12:0,14:0,16:1,=1$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:0,12:0,16:2,=2 \\ 10:0,12:0,14:-1,16:2,=1$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:0,=0 \quad 9:2,12:0,16:0,=2 \\ 10:0,12:0,14:1,16:0,=1$$

embedding 18 [1, 1, -1, 1] with multiplicity 2

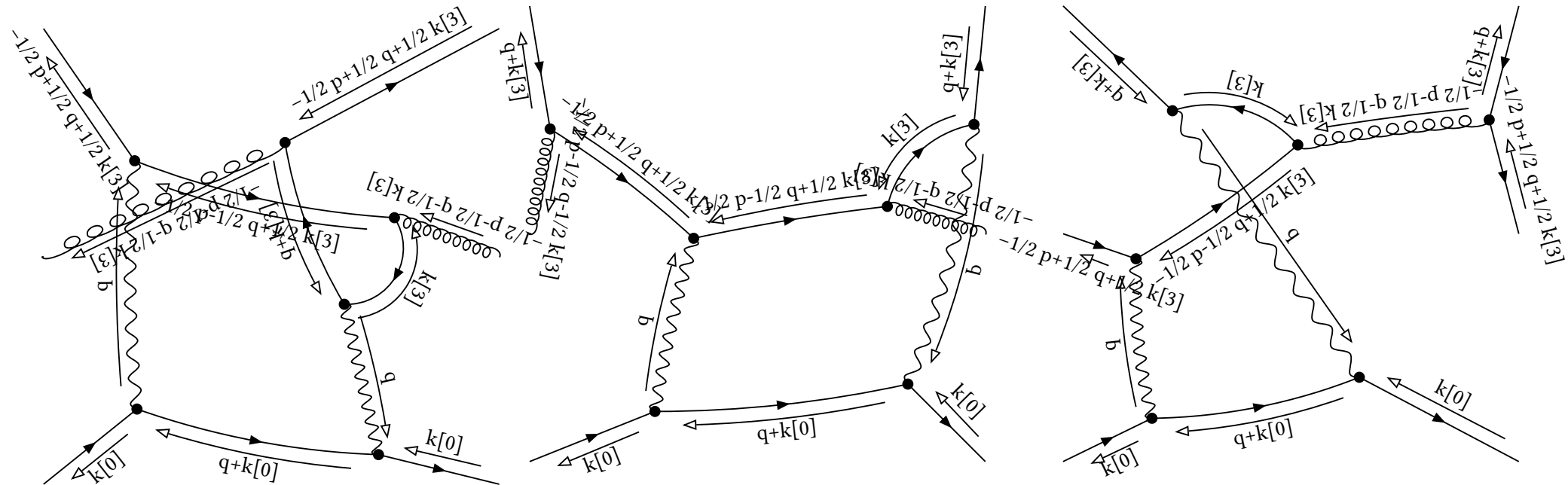
initial

Denominator:

$$1/16 \text{prop}[0,k[3]]^{-1} \text{prop}[0,q+k[3]]^{-1} \text{prop}[0,-1/2 p+1/2 q+1/2 k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 q+1/2 k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 q-1/2 k[3]]^{-1}$$

Partial Fractioned Denominator:

$$\begin{aligned} & -1/4 (2 \text{dot}[p,q]+\text{dot}[q,q])^{-1} (-\text{dot}[p,p]-2 \text{dot}[p,q]-\text{dot}[q,q])^{-1} \text{prop}[0,k[3]]^{-1} \text{prop}[0,q+k[3]]^{-1} \text{prop}[0,-1/2 p+1/2 q+1/2 k[3]]^{-1} \\ & +1/4 (2 \text{dot}[p,q]+\text{dot}[q,q])^{-1} (-\text{dot}[p,p]-2 \text{dot}[p,q]-\text{dot}[q,q])^{-1} \text{prop}[0,k[3]]^{-1} \text{prop}[0,q+k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 q+1/2 k[3]]^{-1} \\ & -1/8 (2 \text{dot}[p,q]+\text{dot}[q,q])^{-1} (-\text{dot}[p,p]-2 \text{dot}[p,q]-\text{dot}[q,q])^{-1} \text{prop}[0,k[3]]^{-1} \text{prop}[0,-1/2 p+1/2 q+1/2 k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 q+1/2 k[3]]^{-1} \\ & +1/8 (2 \text{dot}[p,q]+\text{dot}[q,q])^{-1} (-\text{dot}[p,p]-2 \text{dot}[p,q]-\text{dot}[q,q])^{-1} \text{prop}[0,q+k[3]]^{-1} \text{prop}[0,-1/2 p+1/2 q+1/2 k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 q+1/2 k[3]]^{-1} \\ & -1/4 (-\text{dot}[p,p]-2 \text{dot}[p,q]-\text{dot}[q,q])^{-1} \text{prop}[0,k[3]]^{-1} \text{prop}[0,q+k[3]]^{-1} \text{prop}[0,-1/2 p+1/2 q+1/2 k[3]]^{-1} \text{dot}[p,p]^{-1} \\ & -1/4 (-\text{dot}[p,p]-2 \text{dot}[p,q]-\text{dot}[q,q])^{-1} \text{prop}[0,k[3]]^{-1} \text{prop}[0,q+k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 q-1/2 k[3]]^{-1} \text{dot}[p,p]^{-1} \\ & +1/8 (-\text{dot}[p,p]-2 \text{dot}[p,q]-\text{dot}[q,q])^{-1} \text{prop}[0,k[3]]^{-1} \text{prop}[0,-1/2 p+1/2 q+1/2 k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 q-1/2 k[3]]^{-1} \text{dot}[p,p]^{-1} \\ & +1/8 (-\text{dot}[p,p]-2 \text{dot}[p,q]-\text{dot}[q,q])^{-1} \text{prop}[0,q+k[3]]^{-1} \text{prop}[0,-1/2 p+1/2 q+1/2 k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 q+1/2 k[3]]^{-1} \text{dot}[p,p]^{-1} \\ & +1/8 (-\text{dot}[p,p]-2 \text{dot}[p,q]-\text{dot}[q,q])^{-1} \text{prop}[0,q+k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 q+1/2 k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 q-1/2 k[3]]^{-1} \text{dot}[p,p]^{-1} \\ & -1/16 (-\text{dot}[p,p]-2 \text{dot}[p,q]-\text{dot}[q,q])^{-1} \text{prop}[0,-1/2 p+1/2 q+1/2 k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 q+1/2 k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 q-1/2 k[3]]^{-1} \\ & \text{dot}[p,p]^{-1} \end{aligned}$$



$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:0,12:0,=1 \quad 9:-1,12:0,16:0,=-1 \\ & 10:0,12:0,14:1,16:0,=1 \end{aligned}$$

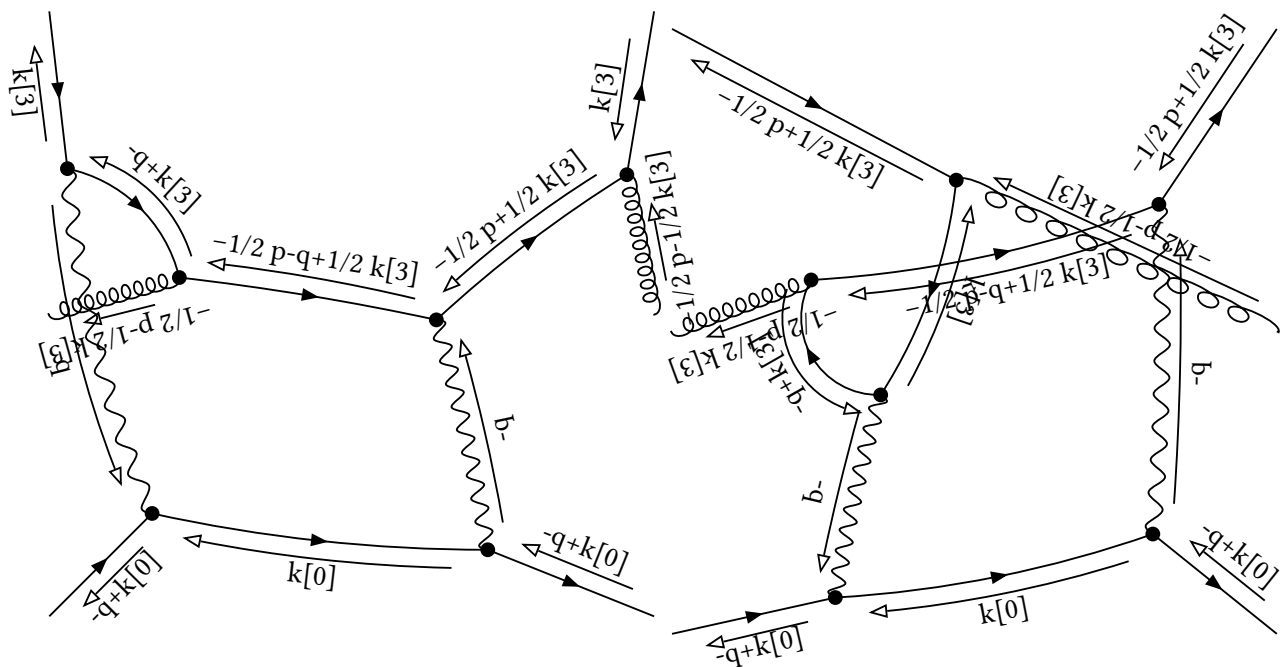
$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:0,12:0,=1 \quad 9:-2,12:0,16:1,=-1 \\ & 10:0,12:0,14:0,16:1,=1 \end{aligned}$$

$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:0,12:0,=1 \quad 9:0,12:0,16:-1,=-1 \\ & 10:0,12:0,14:2,16:-1,=1 \end{aligned}$$

final

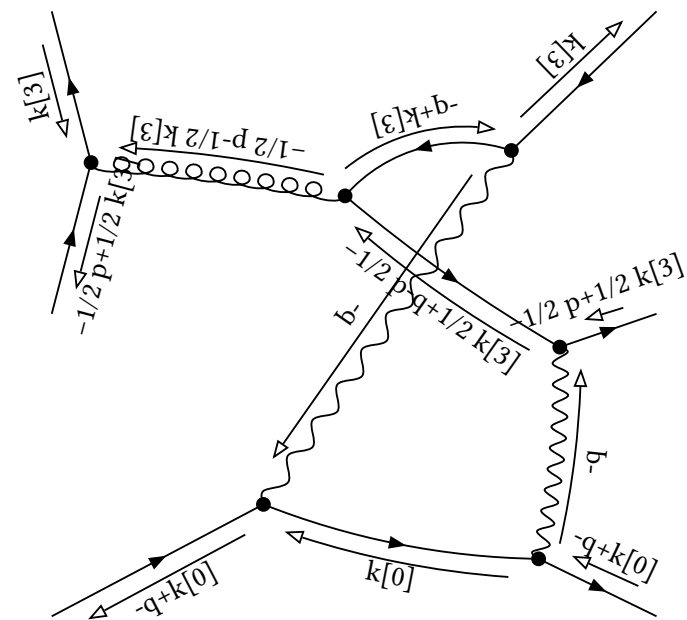
Denominator:

$$1/16 \text{prop}[0,k[3]]^{-1} \text{prop}[0,-q+k[3]]^{-1} \text{prop}[0,-1/2 p+1/2 k[3]]^{-1} \text{prop}[0,-1/2 p-1/2 k[3]]^{-1} \text{prop}[0,-1/2 p-q+1/2 k[3]]^{-1}$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:1,=1 \quad 9:-2,12:1,16:0,=-1 \\ 10:0,12:1,14:0,16:0,=1$$

$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:1,12:0,=1 \quad 9:-1,12:0,16:0,=-1 \\ 10:1,12:0,14:0,16:0,=1$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:2,12:-1,=1 \quad 9:0,12:-1,16:0,=-1 \quad 10:2,12:-1,14:0,16:0,=1$$

embedding 19 [1, 1, 0, 1] with multiplicity 2

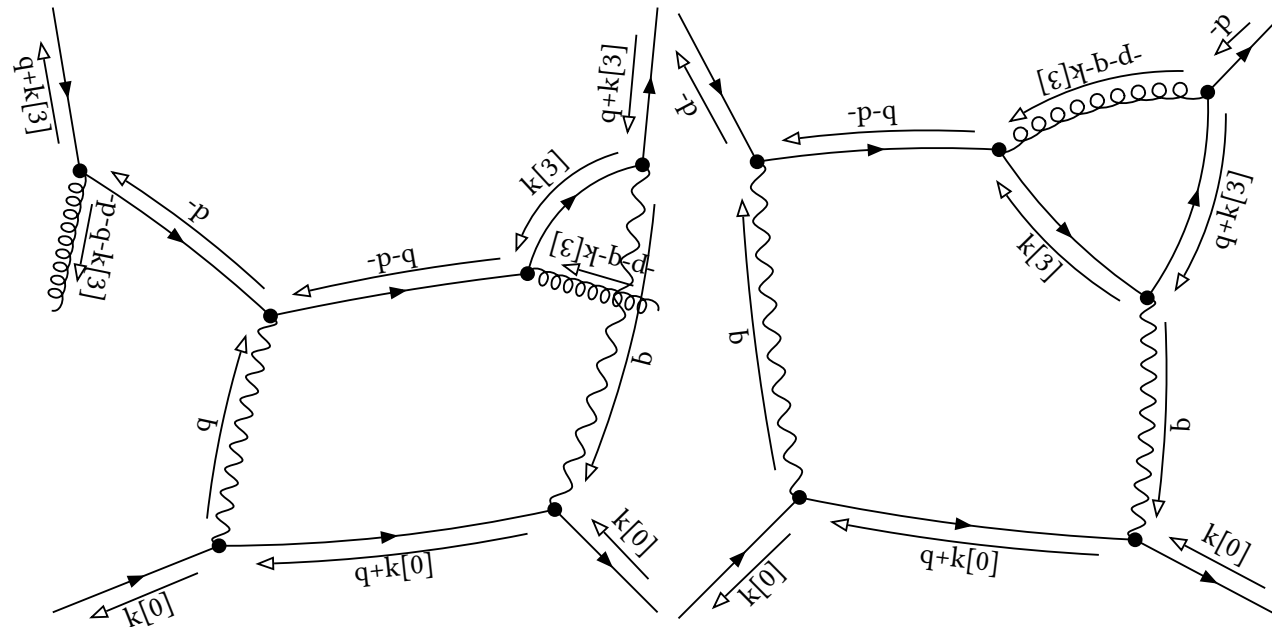
initial

Denominator:

$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, -p]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-q]^{-1} \text{prop}[0, -p-q-k[3]]^{-1}$$

Partial Fractioned Denominator:

$$(\text{dot}[p, p] + 2 \text{dot}[p, q] + \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-q-k[3]]^{-1} \text{dot}[p, p]^{-1}$$

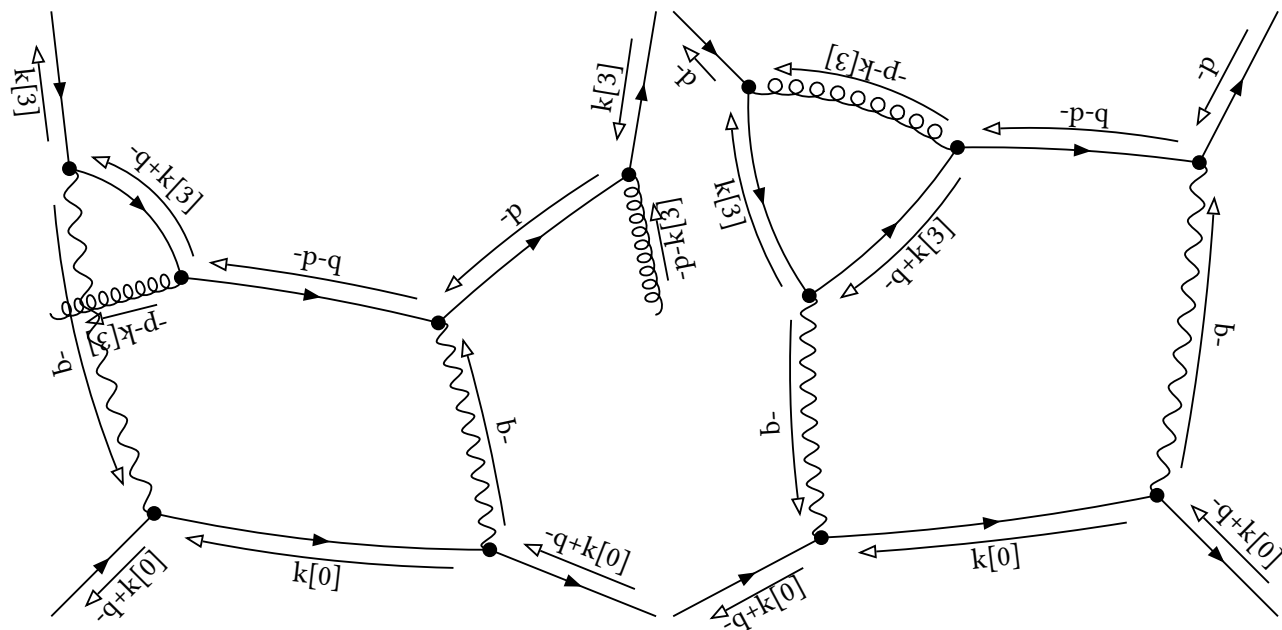


$$\begin{aligned} 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:0,12:0,=1 \quad 9:-1,12:0,16:1,=0 \\ 10:0,12:0,14:0,16:1,=1 \end{aligned}$$

$$\begin{aligned} 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:0,12:0,=1 \quad 9:0,12:0,16:0,=0 \\ 10:0,12:0,14:1,16:0,=1 \end{aligned}$$

final

Denominator:

$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, -p]^{-1} \text{prop}[0, -q+k[3]]^{-1} \text{prop}[0, -p-q]^{-1} \text{prop}[0, -p-k[3]]^{-1}$$

$$\begin{aligned} 0:1,2:0, &=1 \quad 2:0,4:0,6:0,10:0,12:1, &=1 \quad 9:-1,12:1,16:0, &=0 \\ 10:0,12:1,14:0,16:0, &=1 \end{aligned}$$
$$\begin{aligned} 0:1,2:0, &=1 & 2:0,4:0,6:0,10:1,12:0, &=1 & 9:0,12:0,16:0, &=0 \\ 10:1,12:0,14:0,16:0, &=1 \end{aligned}$$

embedding 20 [1, 1, 1, 2] with multiplicity 2

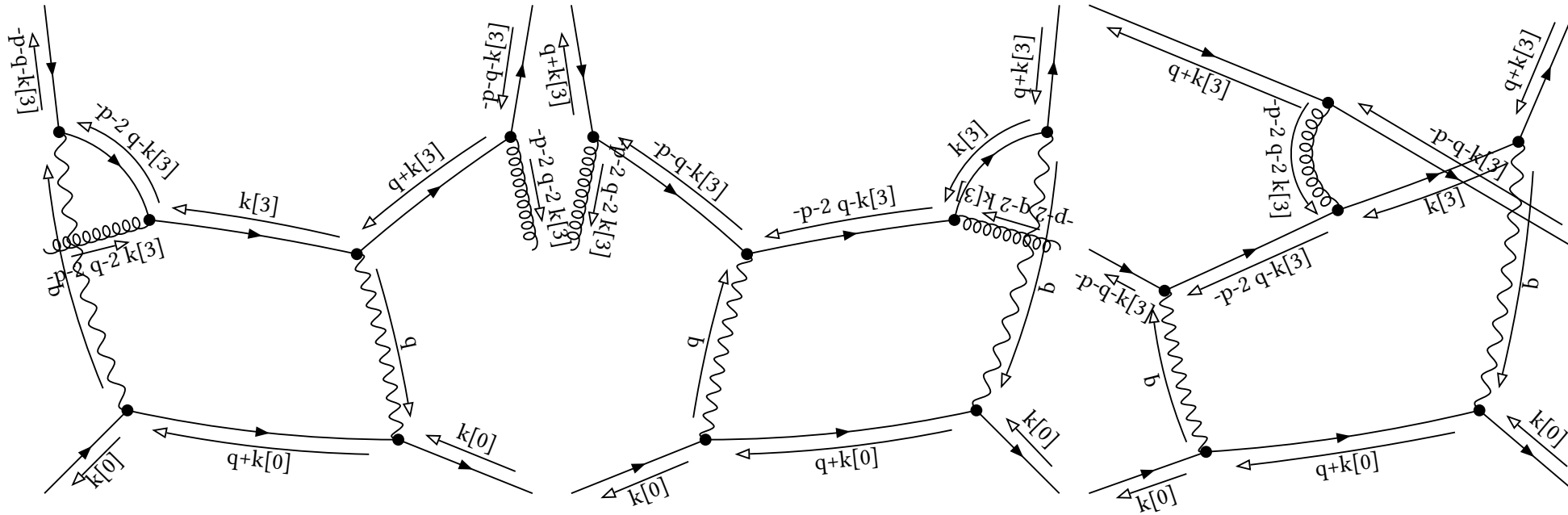
initial

Denominator:

$$\text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-q-k[3]]^{-1} \text{prop}[0, -p-2q-k[3]]^{-1} \text{prop}[0, -p-2q-2k[3]]^{-1}$$

Partial Fractioned Denominator:

$$\begin{aligned} & 1/2 (-2 \text{dot}[p, q] - 2 \text{dot}[q, q])^{-1} (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-q-k[3]]^{-1} \\ & - 1/2 (-2 \text{dot}[p, q] - 2 \text{dot}[q, q])^{-1} (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-2q-k[3]]^{-1} \\ & - 1/2 (-2 \text{dot}[p, q] - 2 \text{dot}[q, q])^{-1} (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, -p-q-k[3]]^{-1} \text{prop}[0, -p-2q-k[3]]^{-1} \\ & + 1/2 (-2 \text{dot}[p, q] - 2 \text{dot}[q, q])^{-1} (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-q-k[3]]^{-1} \text{prop}[0, -p-2q-k[3]]^{-1} \\ & - (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-q-k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & + 2 (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-2q-2k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & + 2 (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, k[3]]^{-1} \text{prop}[0, -p-q-k[3]]^{-1} \text{prop}[0, -p-2q-2k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & - (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-q-k[3]]^{-1} \text{prop}[0, -p-2q-k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & + 2 (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, q+k[3]]^{-1} \text{prop}[0, -p-2q-k[3]]^{-1} \text{prop}[0, -p-2q-2k[3]]^{-1} \text{dot}[p, p]^{-1} \\ & + 2 (1/2 \text{dot}[p, p] + 2 \text{dot}[p, q] + 2 \text{dot}[q, q])^{-1} \text{prop}[0, -p-q-k[3]]^{-1} \text{prop}[0, -p-2q-k[3]]^{-1} \text{prop}[0, -p-2q-2k[3]]^{-1} \text{dot}[p, p]^{-1} \end{aligned}$$



$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:0,12:0,=1 \quad 9:1,12:0,16:0,=1 \\ & 10:0,12:0,14:2,16:0,=2 \end{aligned}$$

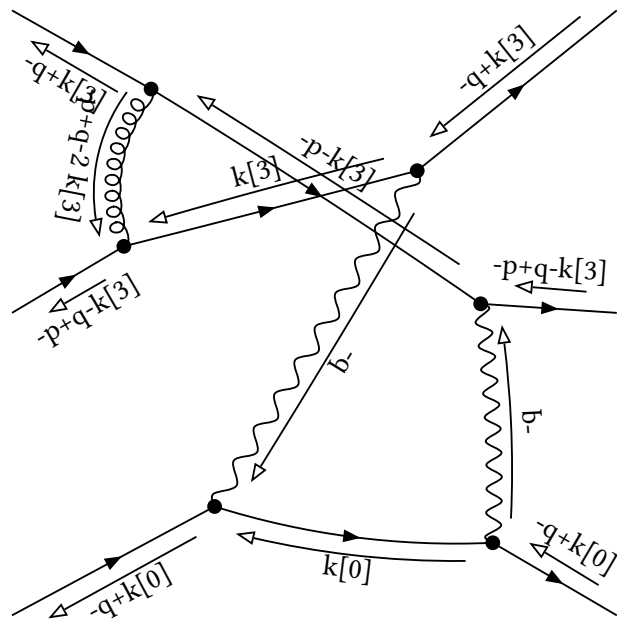
$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:0,12:0,=1 \quad 9:-1,12:0,16:2,=1 \\ & 10:0,12:0,14:0,16:2,=2 \end{aligned}$$

$$\begin{aligned} & 0:0,2:1,=1 \quad 2:1,4:0,6:0,10:0,12:0,=1 \quad 9:0,12:0,16:1,=1 \\ & 10:0,12:0,14:1,16:1,=2 \end{aligned}$$

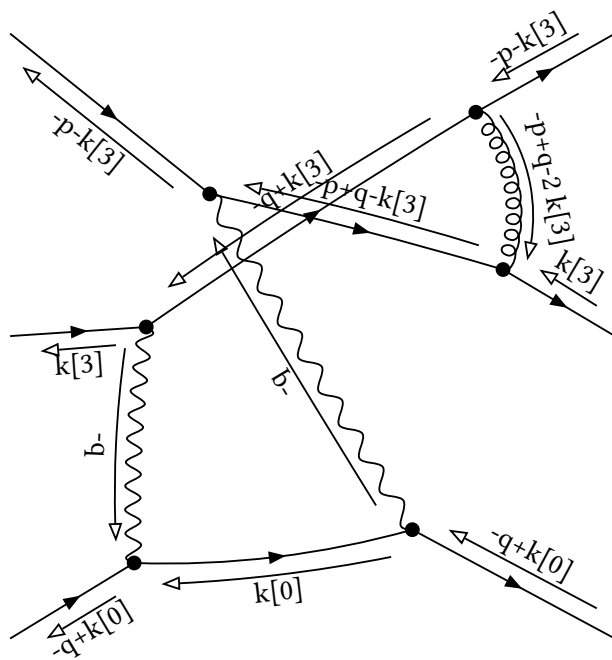
final

Denominator:

$$\text{prop}[0,k[3]]^{-1} \text{prop}[0,-q+k[3]]^{-1} \text{prop}[0,-p-k[3]]^{-1} \text{prop}[0,-p+q-k[3]]^{-1} \text{prop}[0,-p+q-2k[3]]^{-1}$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:1,12:0,=1 \quad 9:0,12:0,16:1,=1 \\ 10:1,12:0,14:0,16:1,=2$$



$$0:1,2:0,=1 \quad 2:0,4:0,6:0,10:0,12:1,=1 \quad 9:0,12:1,16:0,=1 \\ 10:0,12:1,14:1,16:0,=2$$

