embedding 1 [1, −2, −1, −2]

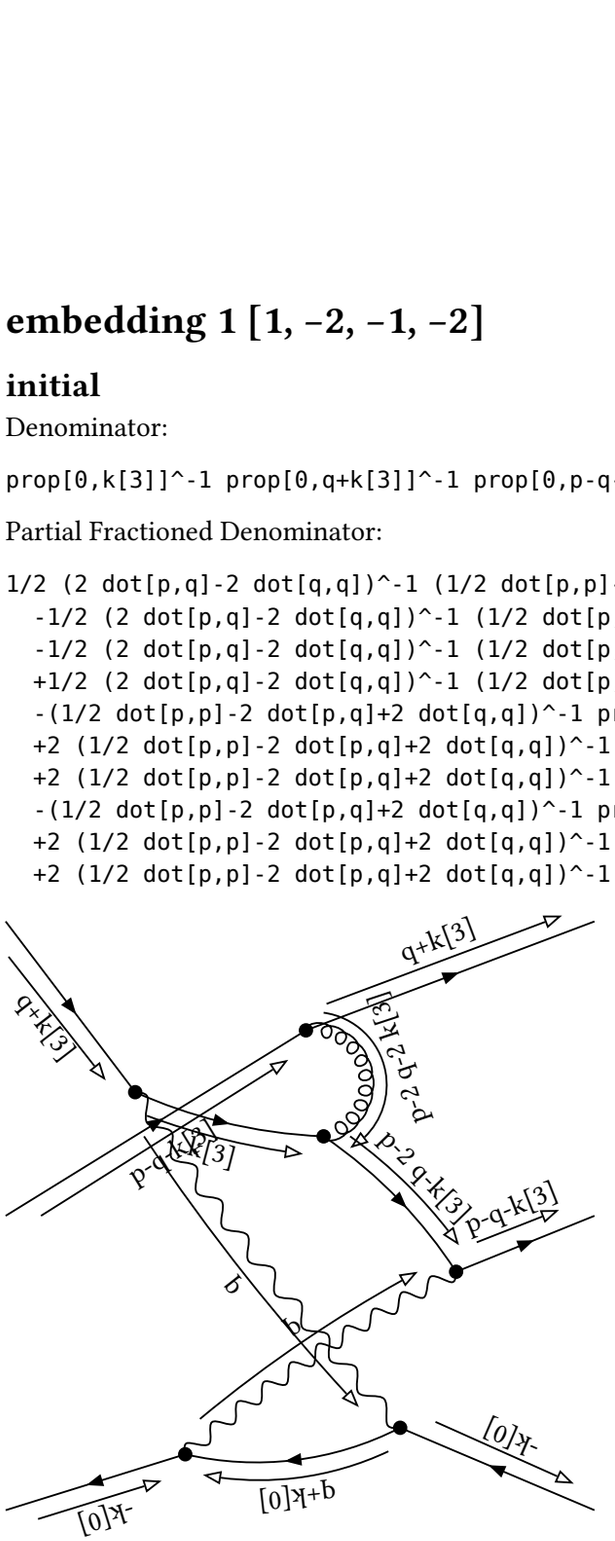
initial

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-q-k[3]]^-1 prop[0,p-2 q-k[3]]^-1 prop[0,p-2 q-2 k[3]]^-1
```

Partial Fractioned Denominator:

```
1/2 (2 dot[p,q]-2 dot[q,q])^-1 (1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-q-k[3]]^-1
  -1/2 (2 dot[p,q]-2 dot[q,q])^-1 (1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-2 q-k[3]]^-1
  -1/2 (2 dot[p,q]-2 dot[q,q])^-1 (1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,p-q-k[3]]^-1 prop[0,p-2 q-k[3]]^-1
  +1/2 (2 dot[p,q]-2 dot[q,q])^-1 (1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,p-q-k[3]]^-1 prop[0,p-2 q-k[3]]^-1
  -(1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-q-k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-2 q-2 k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,p-q-k[3]]^-1 prop[0,p-2 q-2 k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,p-q-k[3]]^-1 prop[0,p-2 q-k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,p-2 q-k[3]]^-1 prop[0,p-2 q-2 k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,p-q-k[3]]^-1 prop[0,p-2 q-k[3]]^-1 prop[0,p-2 q-2 k[3]]^-1 dot[p,p]^-1
```

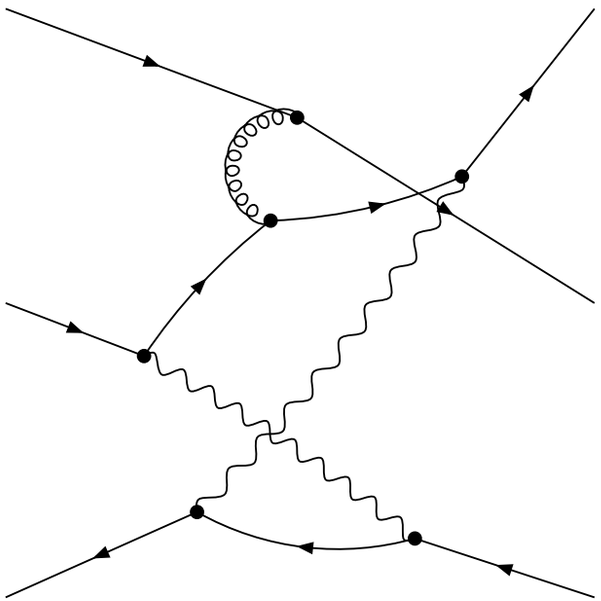


−3+15+17

final

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-k[3]]^-1 prop[0,p-2 k[3]]^-1 prop[0,p+q-k[3]]^-1
```



−1+11+13

embedding 2 [1, −1, −2, −1]

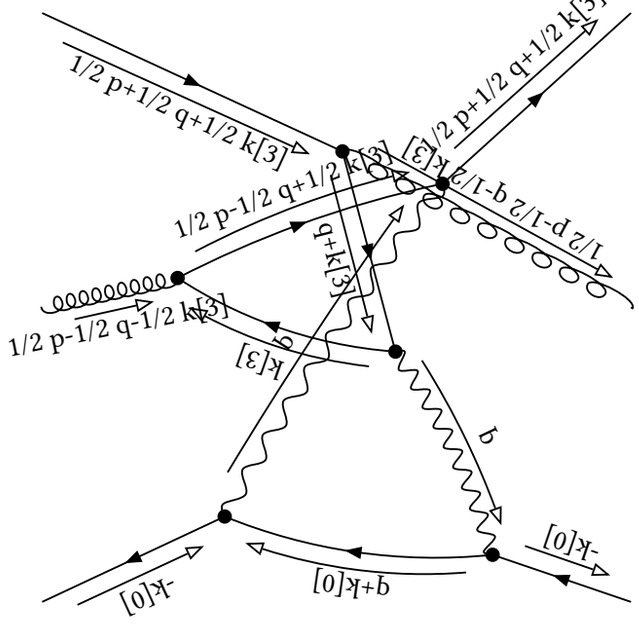
initial

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+1/2 q+1/2 k[3]]^-1 prop[0,1/2 p-1/2 q+1/2 k[3]]^-1 prop[0,1/2 p-1/2 q-1/2 k[3]]^-1
```

Partial Fractioned Denominator:

```
-4 (-2 dot[p,q]+dot[q,q])^-1 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+1/2 q+1/2 k[3]]^-1
  +4 (-2 dot[p,q]+dot[q,q])^-1 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p-1/2 q+1/2 k[3]]^-1
  -2 (-2 dot[p,q]+dot[q,q])^-1 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,1/2 p+1/2 q+1/2 k[3]]^-1 prop[0,1/2 p-1/2 q+1/2
k[3]]^-1
  +2 (-2 dot[p,q]+dot[q,q])^-1 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+1/2 q+1/2 k[3]]^-1 prop[0,1/2 p-1/2 q+1/2
k[3]]^-1
  -4 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+1/2 q+1/2 k[3]]^-1 dot[p,p]^-1
  -4 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p-1/2 q-1/2 k[3]]^-1 dot[p,p]^-1
  +2 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,1/2 p+1/2 q+1/2 k[3]]^-1 prop[0,1/2 p-1/2 q-1/2 k[3]]^-1 dot[p,p]^-1
  +2 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+1/2 q+1/2 k[3]]^-1 prop[0,1/2 p-1/2 q+1/2 k[3]]^-1 dot[p,p]^-1
  +2 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p-1/2 q+1/2 k[3]]^-1 prop[0,1/2 p-1/2 q-1/2 k[3]]^-1 dot[p,p]^-1
  -(-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,1/2 p+1/2 q+1/2 k[3]]^-1 prop[0,1/2 p-1/2 q+1/2 k[3]]^-1 prop[0,1/2 p-1/2 q-1/2 k[3]]^-1
dot[p,p]^-1
```

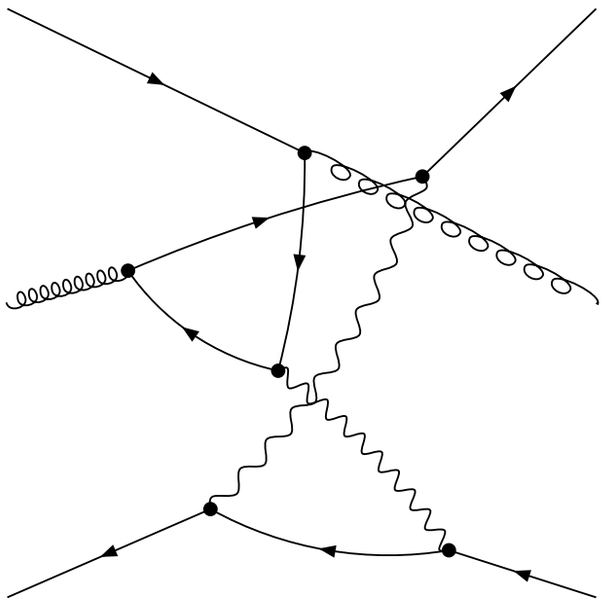


−3+9+15

final

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+k[3]]^-1 prop[0,-p+2 k[3]]^-1 prop[0,-p+q+2 k[3]]^-1
```



−1-9+13

embedding 3 [1, −1, −1, −2]

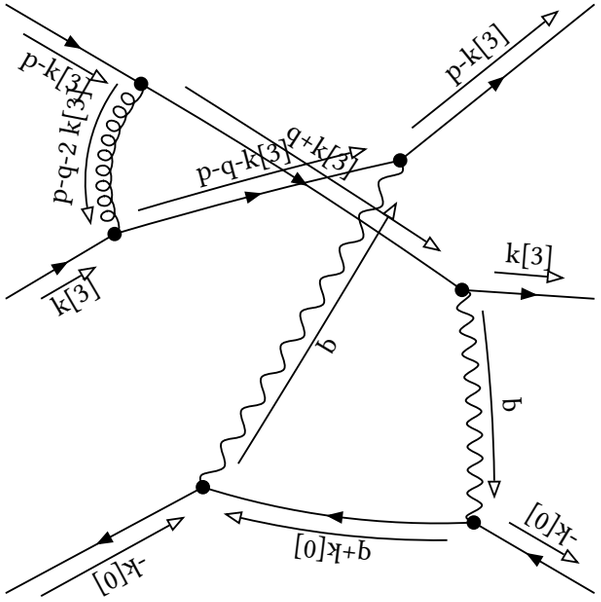
initial

Denominator:

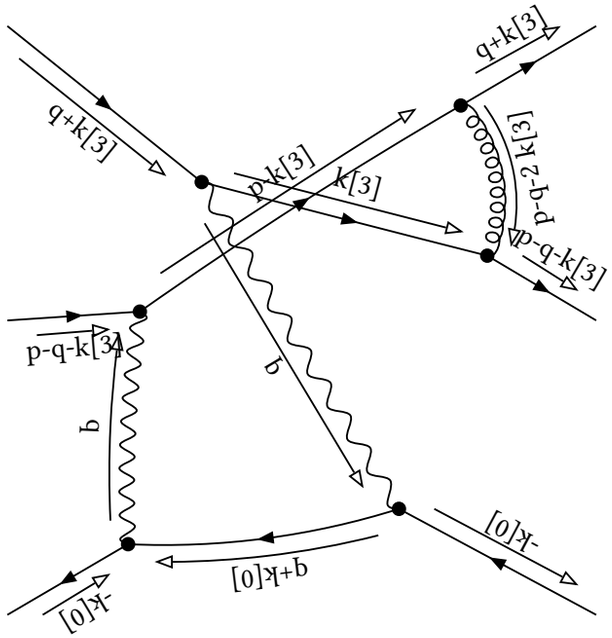
```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-k[3]]^-1 prop[0,p-q-k[3]]^-1 prop[0,p-q-2 k[3]]^-1
```

Partial Fractioned Denominator:

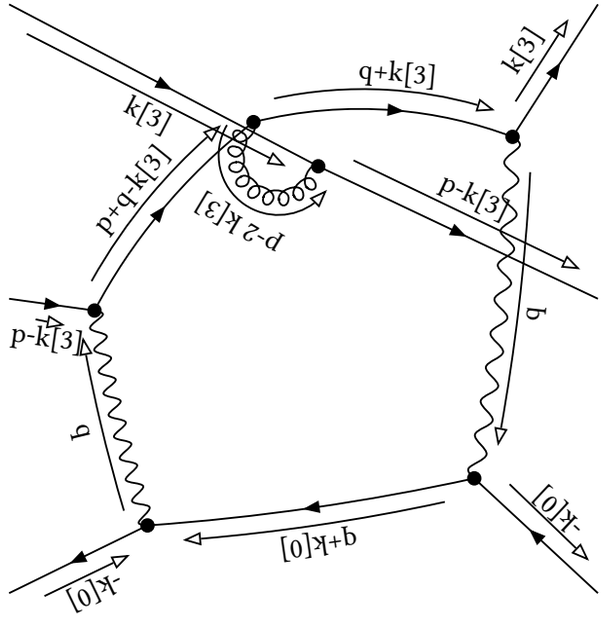
```
-1/2 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-k[3]]^-1
  +(1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-q-2 k[3]]^-1
  +(1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,p-k[3]]^-1 prop[0,p-q-2 k[3]]^-1
  -1/2 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,p-k[3]]^-1 prop[0,p-q-k[3]]^-1
  +(1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,p-q-k[3]]^-1 prop[0,p-q-2 k[3]]^-1
  +(1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,p-k[3]]^-1 prop[0,p-q-k[3]]^-1 prop[0,p-q-2 k[3]]^-1
  +1/4 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-k[3]]^-1 dot[p,q]^-1
  -1/4 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-q-k[3]]^-1 dot[p,q]^-1
  -1/4 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,p-k[3]]^-1 prop[0,p-q-k[3]]^-1 dot[p,q]^-1
  +1/4 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,p-k[3]]^-1 prop[0,p-q-k[3]]^-1 dot[p,q]^-1
```



−3+13+15



−3+11+17

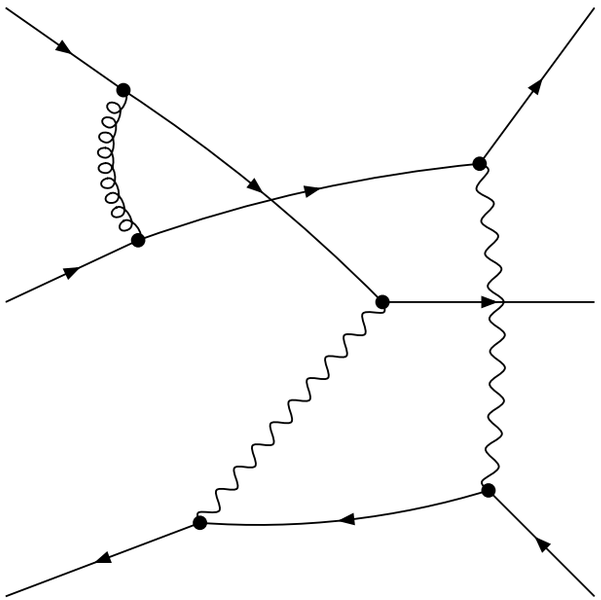


−3+11+13

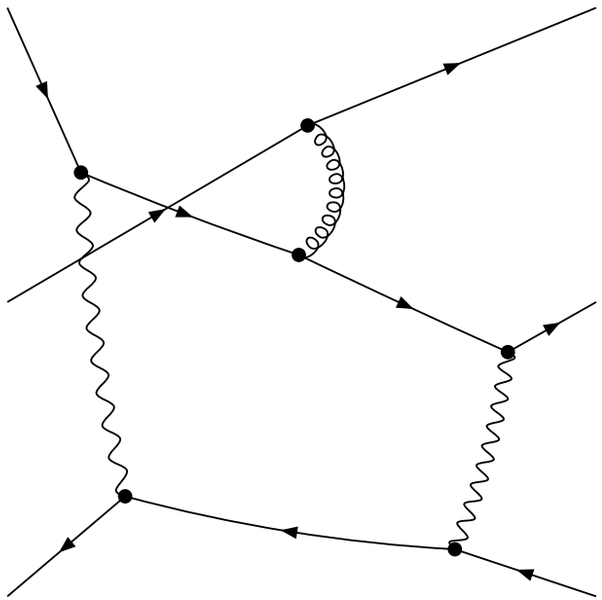
final

Denominator:

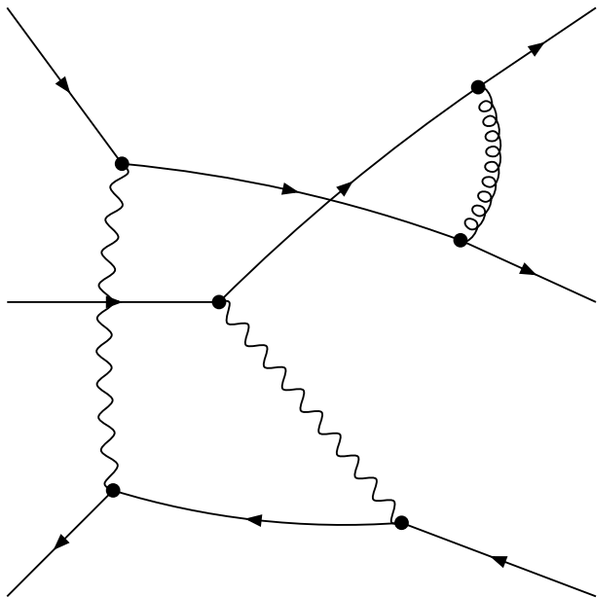
```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-k[3]]^-1 prop[0,p-q-k[3]]^-1 prop[0,p-q-2 k[3]]^-1
```



−1+13+15



−1+15+17



−1+11+17

embedding 4 [1, −1, −1, −1]

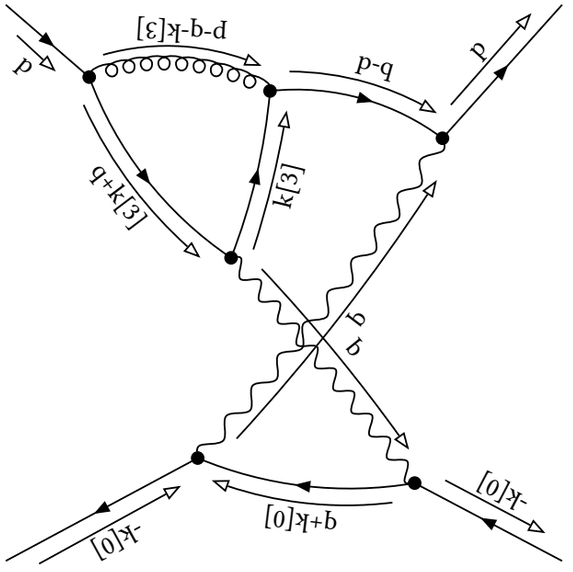
initial

Denominator:

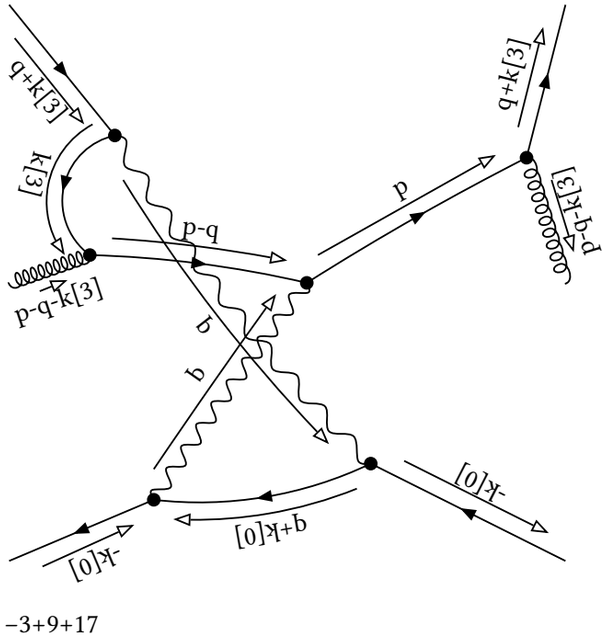
```
prop[0,p]^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-q]^-1 prop[0,p-q-k[3]]^-1
```

Partial Fractioned Denominator:

```
(dot[p,p]-2 dot[p,q]+dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-q-k[3]]^-1 dot[p,p]^-1
```



−3+15

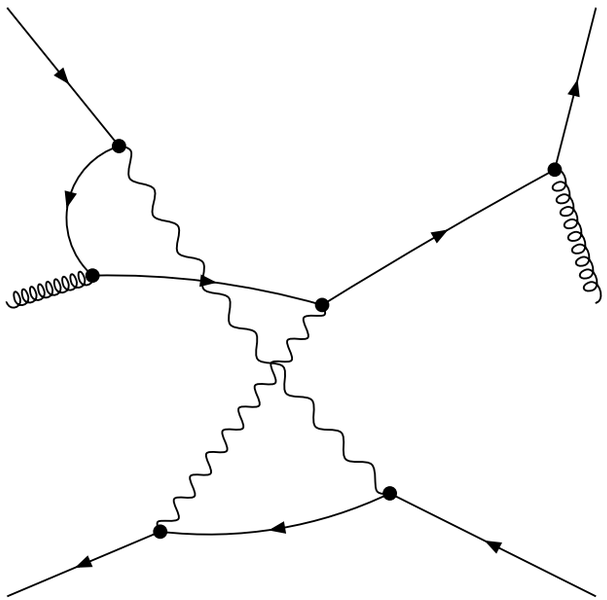


−3+9+17

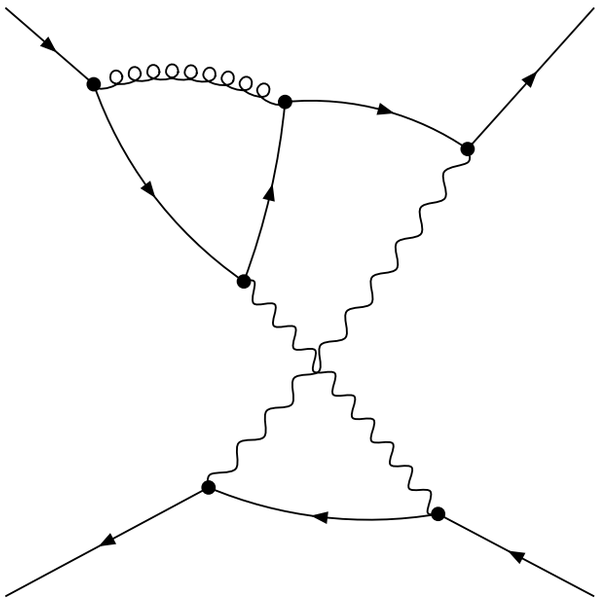
final

Denominator:

```
prop[0,p]^-1 prop[0,k[2]]^-1 prop[0,p+q]^-1 prop[0,p+k[2]]^-1 prop[0,p+q+k[2]]^-1
```



−1-9+11



−1+13

embedding 5 [1, −1, −1, 0]

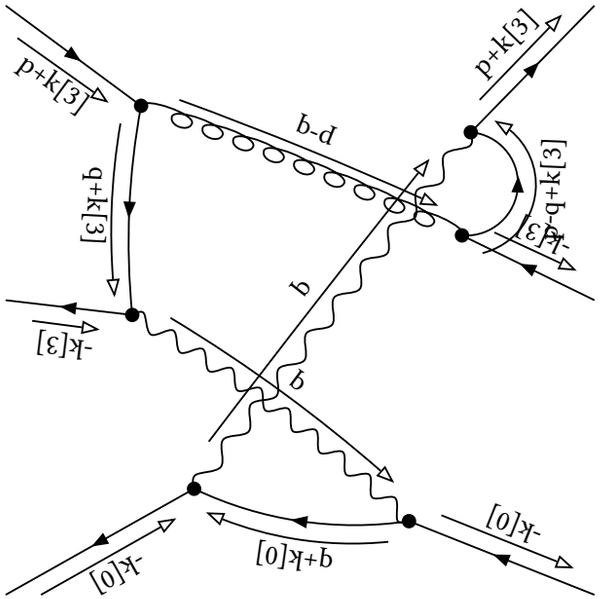
initial

Denominator:

```
prop[0,k[3]]^-1 prop[0,p+k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-q]^-1 prop[0,p-q+k[3]]^-1
```

Partial Fractioned Denominator:

```
(-2 dot[p,q]+2 dot[q,q])^-1 (dot[p,p]-2 dot[p,q]+dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,p+k[3]]^-1 prop[0,q+k[3]]^-1
  +(-2 dot[p,q]+2 dot[q,q])^-1 (dot[p,p]-2 dot[p,q]+dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,p+k[3]]^-1 prop[0,p-q+k[3]]^-1
  -(-2 dot[p,q]+2 dot[q,q])^-1 (dot[p,p]-2 dot[p,q]+dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-q+k[3]]^-1
  -(-2 dot[p,q]+2 dot[q,q])^-1 (dot[p,p]-2 dot[p,q]+dot[q,q])^-1 prop[0,p+k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-q+k[3]]^-1
```

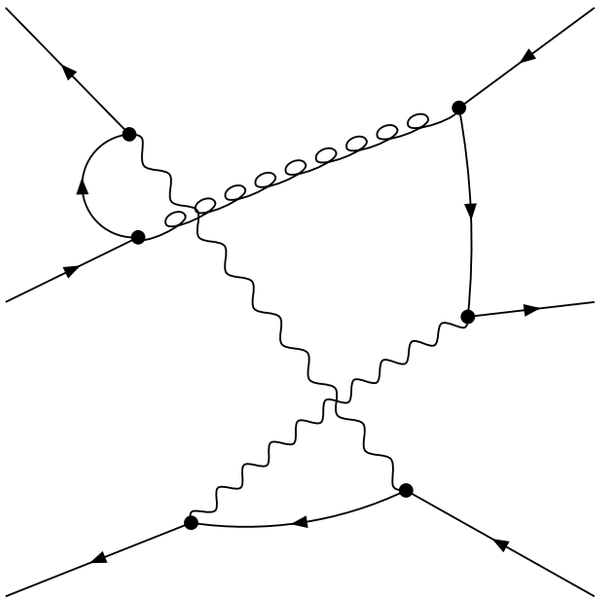


−3-13+15

final

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+k[3]]^-1 prop[0,-p-q]^-1 prop[0,-p-q+k[3]]^-1
```



−1+13-15

embedding 6 [1, −1, 0, −1]

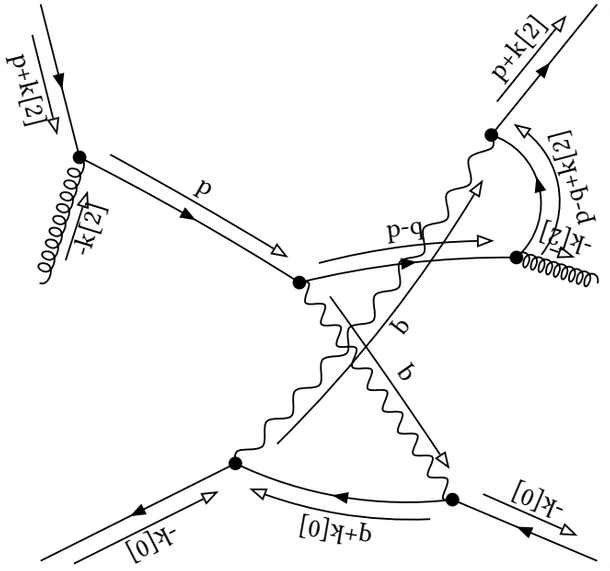
initial

Denominator:

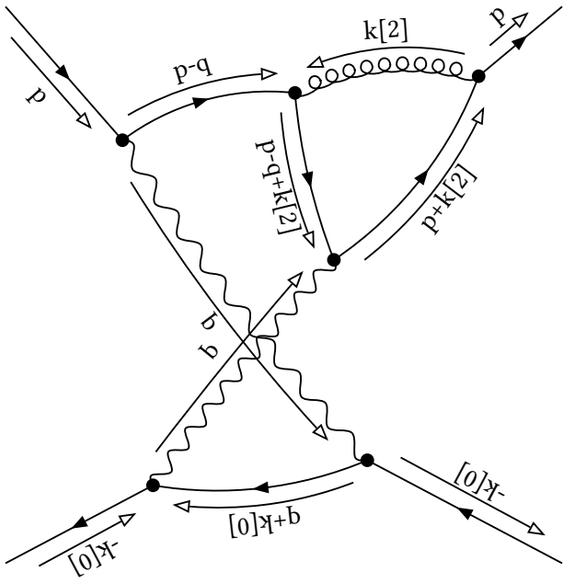
```
prop[0,p]^-1 prop[0,k[2]]^-1 prop[0,p+k[2]]^-1 prop[0,p-q]^-1 prop[0,p-q+k[2]]^-1
```

Partial Fractioned Denominator:

```
(dot[p,p]-2 dot[p,q]+dot[q,q])^-1 prop[0,k[2]]^-1 prop[0,p+k[2]]^-1 prop[0,p-q+k[2]]^-1 dot[p,p]^-1
```



−3-9+15

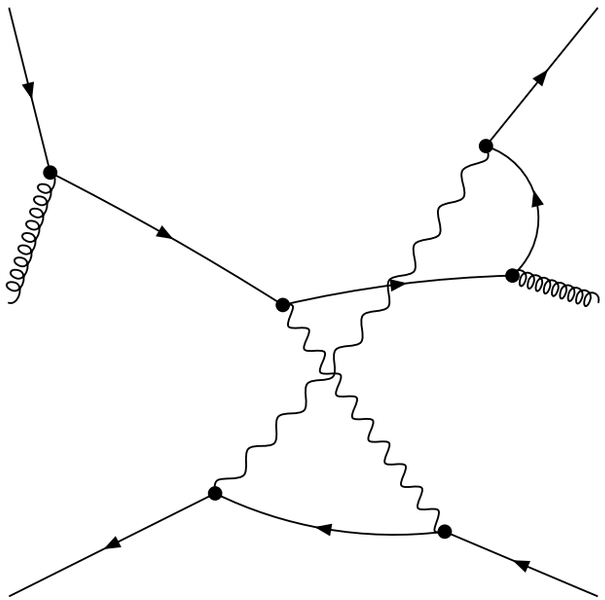


−3+17

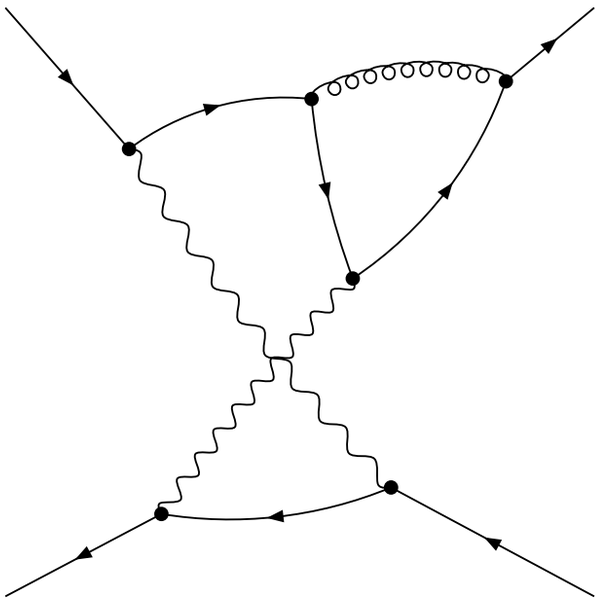
final

Denominator:

```
prop[0,p]^-1 prop[0,k[3]]^-1 prop[0,p+q]^-1 prop[0,q+k[3]]^-1 prop[0,p-k[3]]^-1
```



−1+9+13



−1+11

embedding 7 [1, −1, 1, −1]

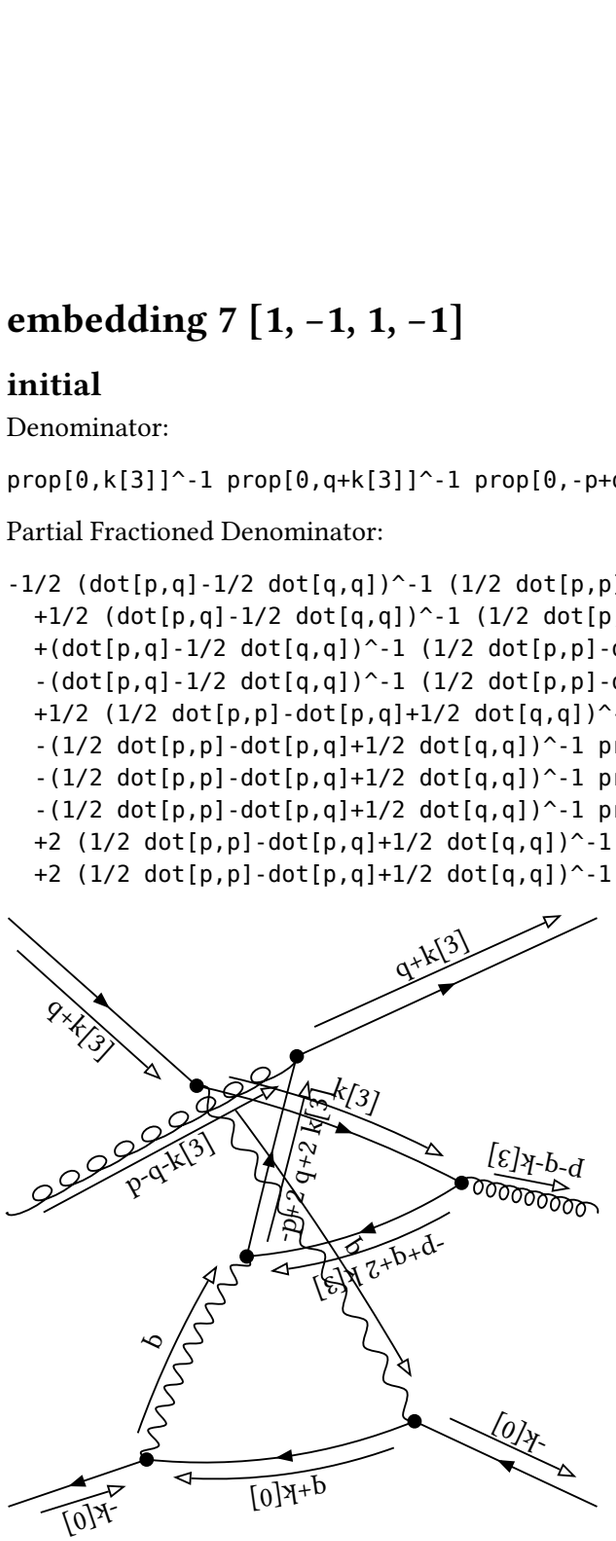
initial

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+q+k[3]]^-1 prop[0,-p+q+2 k[3]]^-1 prop[0,-p+2 q+2 k[3]]^-1
```

Partial Fractioned Denominator:

```
-1/2 (dot[p,q]-1/2 dot[q,q])^-1 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+q+2 k[3]]^-1
  +1/2 (dot[p,q]-1/2 dot[q,q])^-1 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+2 q+2 k[3]]^-1
  +(dot[p,q]-1/2 dot[q,q])^-1 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,-p+q+2 k[3]]^-1 prop[0,-p+2 q+2 k[3]]^-1
  -(dot[p,q]-1/2 dot[q,q])^-1 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-p+q+2 k[3]]^-1 prop[0,-p+2 q+2 k[3]]^-1
  +1/2 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+q+k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+2 q+2 k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,-p+q+k[3]]^-1 prop[0,-p+2 q+2 k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-p+q+k[3]]^-1 prop[0,-p+q+2 k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-p+q+2 k[3]]^-1 prop[0,-p+2 q+2 k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,-p+q+k[3]]^-1 prop[0,-p+q+2 k[3]]^-1 prop[0,-p+2 q+2 k[3]]^-1 dot[p,p]^-1
```

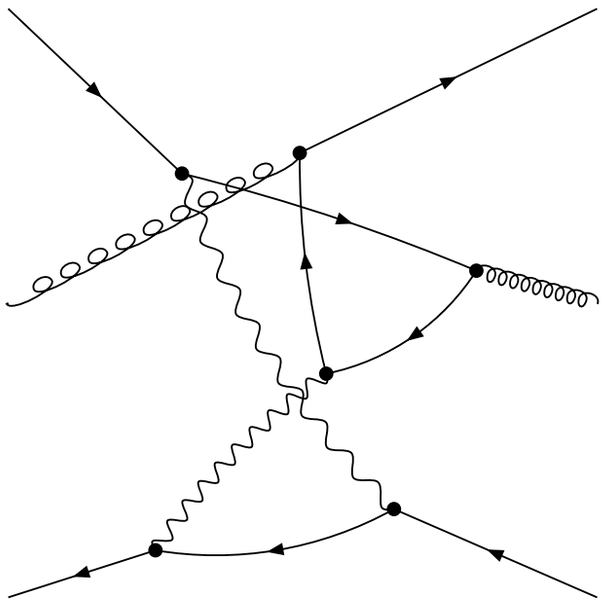


−3-9+17

final

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+1/2 k[3]]^-1 prop[0,1/2 p-1/2 k[3]]^-1 prop[0,1/2 p+q+1/2 k[3]]^-1
```



−1+9+11

embedding 8 [1, −1, 1, 0]

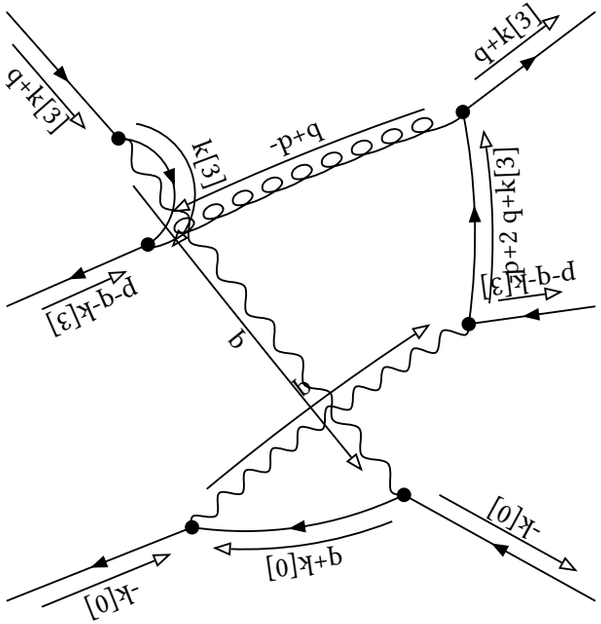
initial

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+q]^-1 prop[0,-p+q+k[3]]^-1 prop[0,-p+2 q+k[3]]^-1
```

Partial Fractioned Denominator:

```
-(2 dot[p,q]-2 dot[q,q])^-1 (dot[p,p]-2 dot[p,q]+dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+q+k[3]]^-1
  +(2 dot[p,q]-2 dot[q,q])^-1 (dot[p,p]-2 dot[p,q]+dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+2 q+k[3]]^-1
  +(2 dot[p,q]-2 dot[q,q])^-1 (dot[p,p]-2 dot[p,q]+dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,-p+q+k[3]]^-1 prop[0,-p+2 q+k[3]]^-1
  -(2 dot[p,q]-2 dot[q,q])^-1 (dot[p,p]-2 dot[p,q]+dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-p+q+k[3]]^-1 prop[0,-p+2 q+k[3]]^-1
```

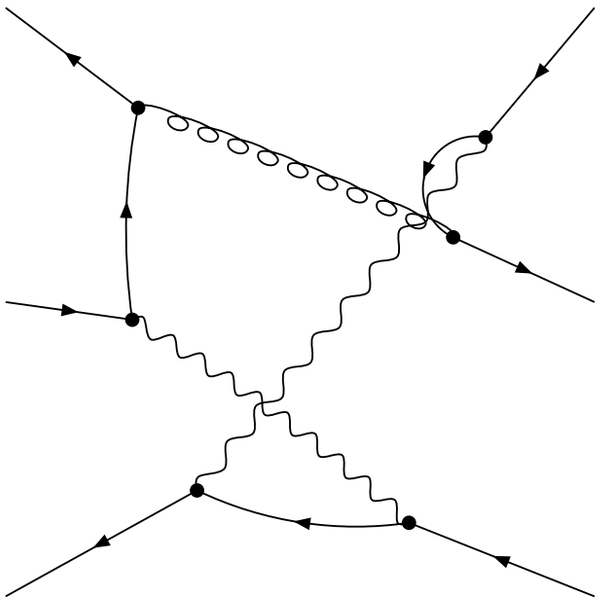


−3-11+17

final

Denominator:

```
prop[0,k[3]]^-1 prop[0,p+q]^-1 prop[0,q+k[3]]^-1 prop[0,p+q+k[3]]^-1 prop[0,p+2 q+k[3]]^-1
```



−1+11-17

embedding 9 [1, 0, −2, −1]

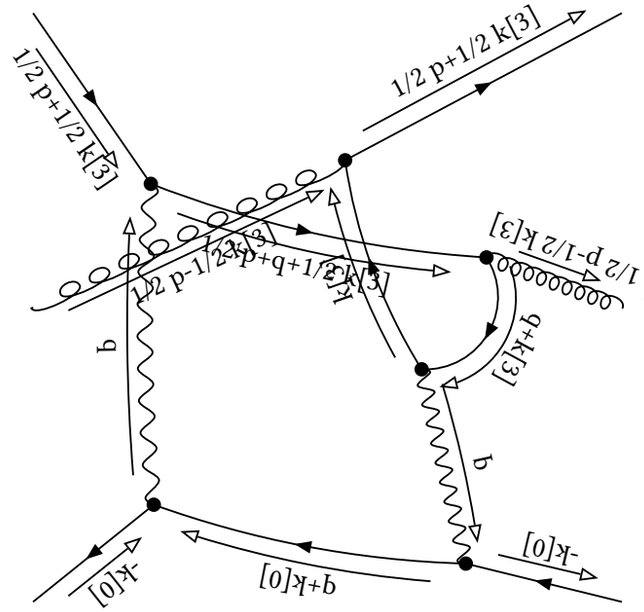
initial

Denominator:

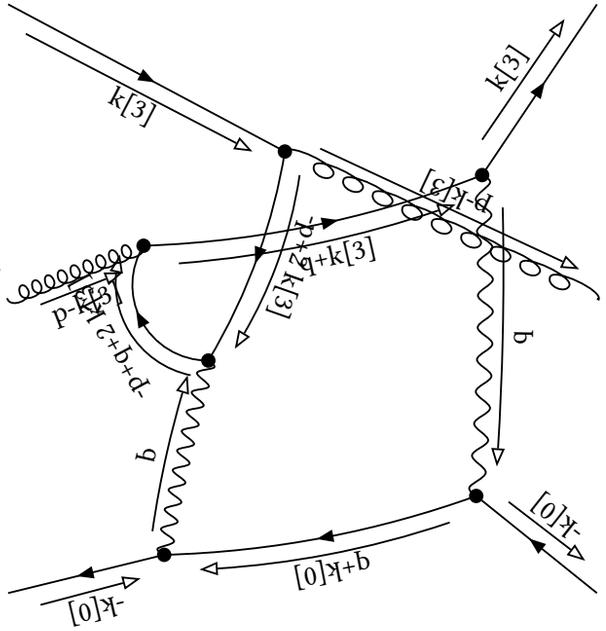
```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+1/2 k[3]]^-1 prop[0,1/2 p-1/2 k[3]]^-1 prop[0,1/2 p+q+1/2 k[3]]^-1
```

Partial Fractioned Denominator:

```
-4 (-2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+1/2 k[3]]^-1 dot[p,p]^-1
  +4 (-2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
  +2 (-2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,1/2 p+1/2 k[3]]^-1 prop[0,1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
  -2 (-2 dot[p,q]-dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+1/2 k[3]]^-1 prop[0,1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
  -4 (-dot[p,p]-2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p-1/2 k[3]]^-1 dot[p,p]^-1
  -4 (-dot[p,p]-2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
  +2 (-dot[p,p]-2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,1/2 p-1/2 k[3]]^-1 prop[0,1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
  +2 (-dot[p,p]-2 dot[p,q]-dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+1/2 k[3]]^-1 prop[0,1/2 p-1/2 k[3]]^-1 dot[p,p]^-1
  +2 (-dot[p,p]-2 dot[p,q]-dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,1/2 p+1/2 k[3]]^-1 prop[0,1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
  -(-dot[p,p]-2 dot[p,q]-dot[q,q])^-1 prop[0,1/2 p+1/2 k[3]]^-1 prop[0,1/2 p-1/2 k[3]]^-1 prop[0,1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
```



−3+9+11

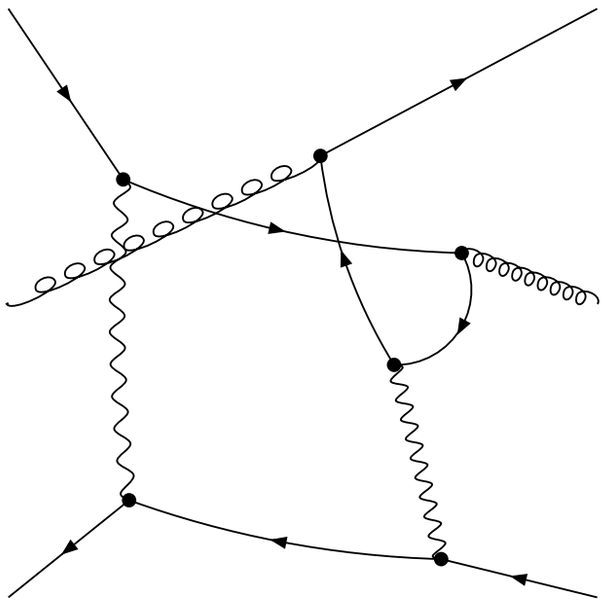


−3-9+13

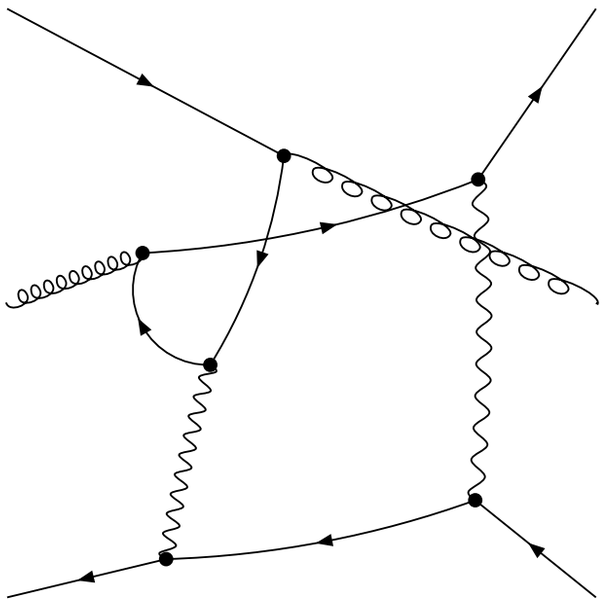
final

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+q+k[3]]^-1 prop[0,-p+q+2 k[3]]^-1 prop[0,-p+2 q+2 k[3]]^-1
```



−1-9+17



−1+9+15

embedding 10 [1, 0, −1, −1]

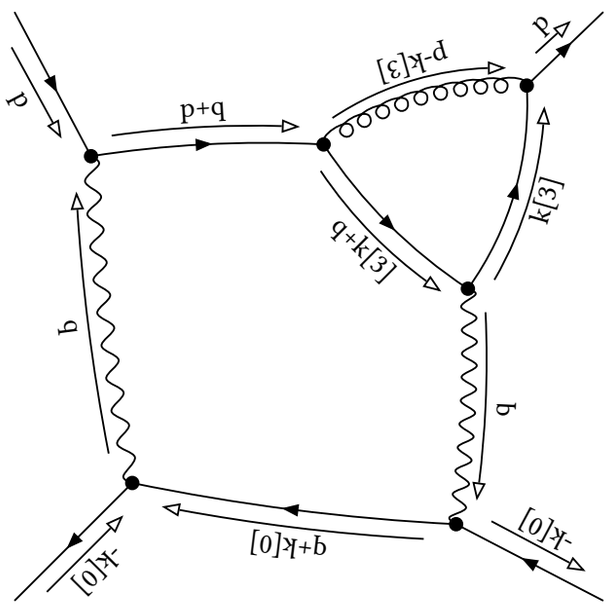
initial

Denominator:

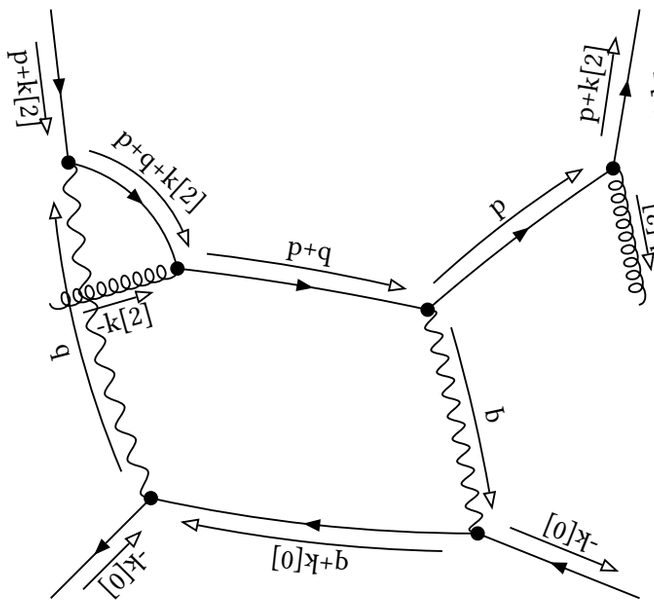
```
prop[0,p]^-1 prop[0,k[3]]^-1 prop[0,p+q]^-1 prop[0,q+k[3]]^-1 prop[0,p-k[3]]^-1
```

Partial Fractioned Denominator:

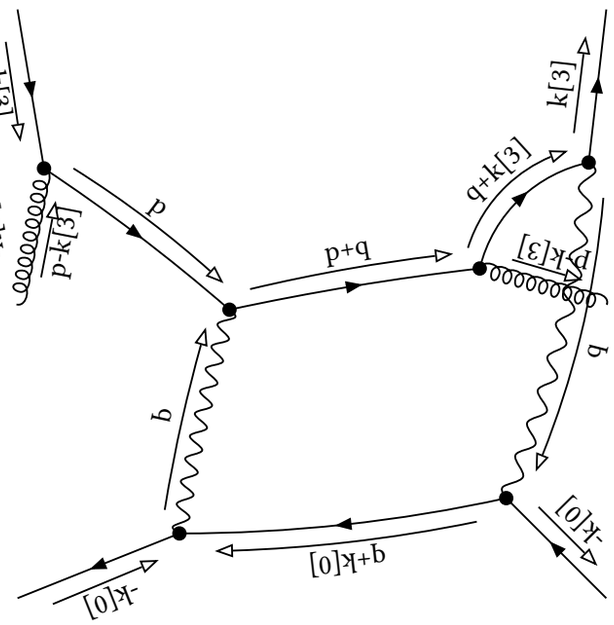
```
(dot[p,p]+2 dot[p,q]+dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-k[3]]^-1 dot[p,p]^-1
```



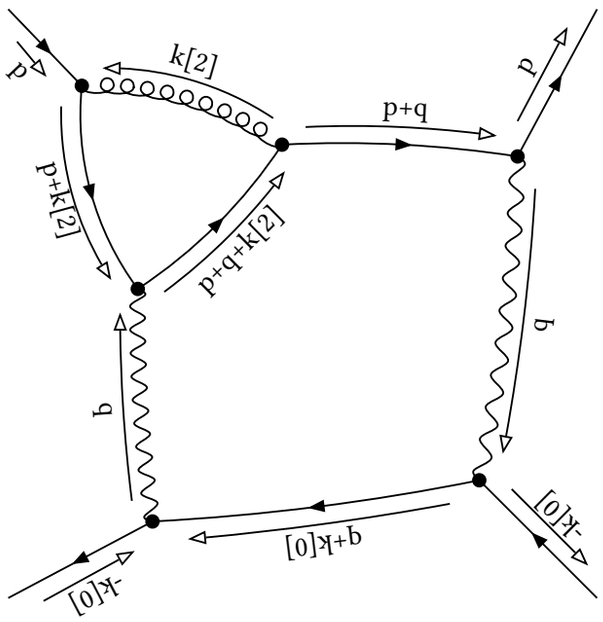
−3+11



−3-9+11



−3+9+13

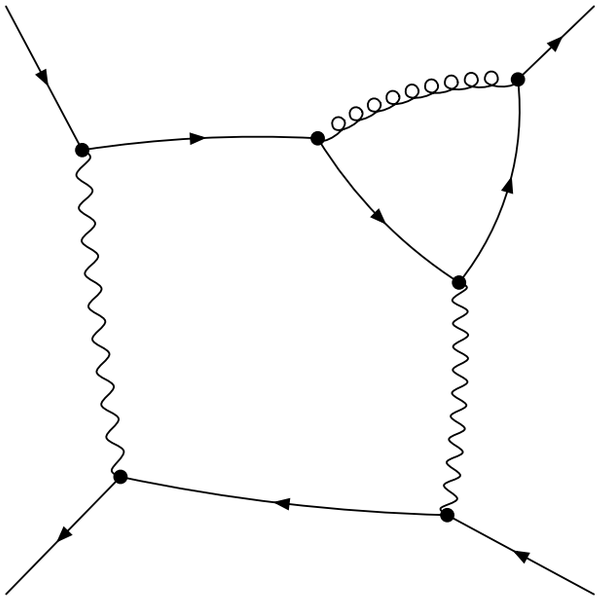


−3+13

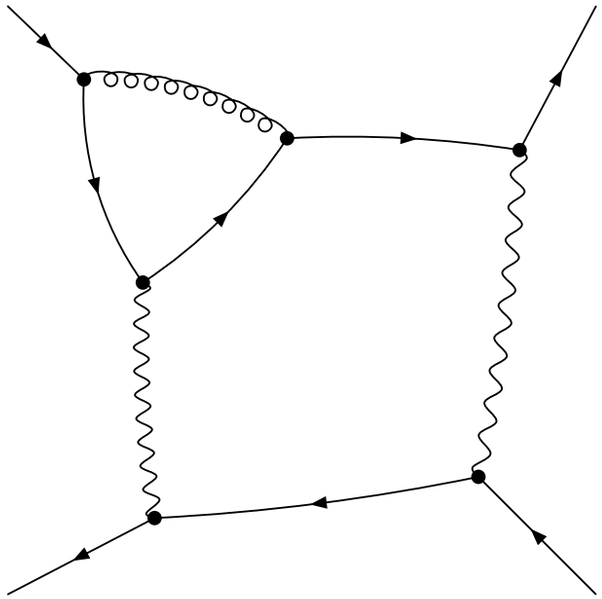
final

Denominator:

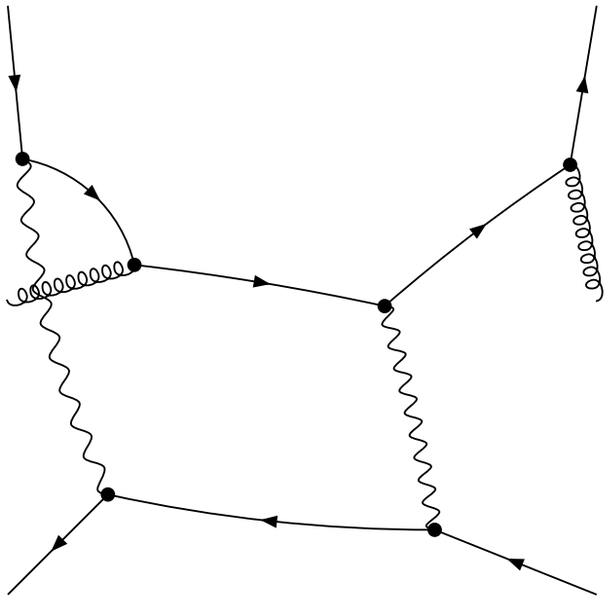
```
prop[0,p]^-1 prop[0,k[2]]^-1 prop[0,p+k[2]]^-1 prop[0,p-q]^-1 prop[0,p-q+k[2]]^-1
```



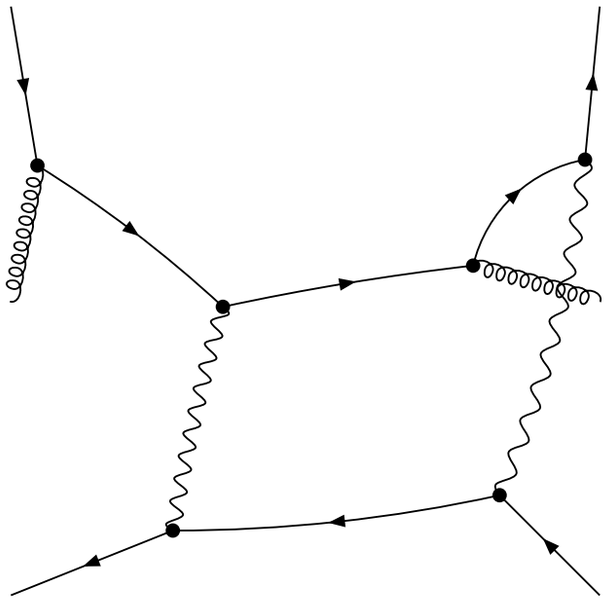
−1+17



−1+15



−1+9+17



−1-9+15

embedding 11 [1, 0, −1, 0]

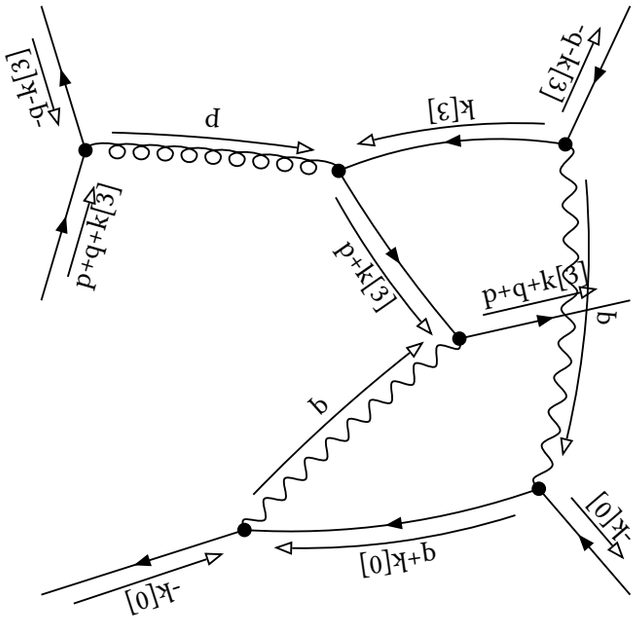
initial

Denominator:

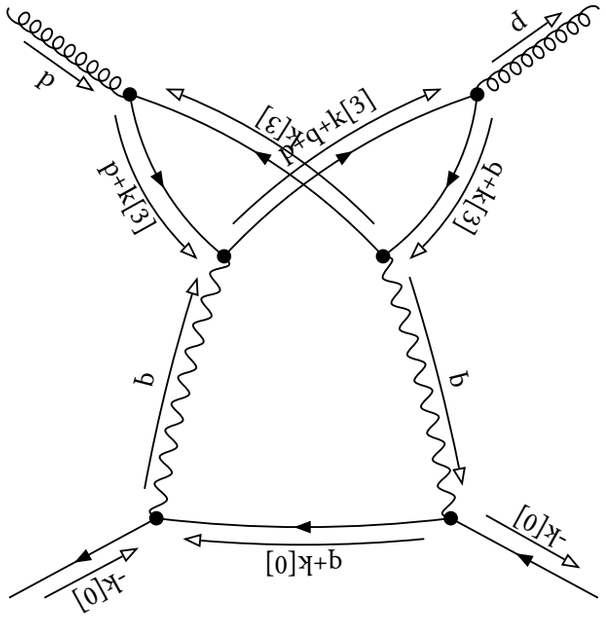
```
prop[0,p]^-1 prop[0,k[3]]^-1 prop[0,p+k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+q+k[3]]^-1
```

Partial Fractioned Denominator:

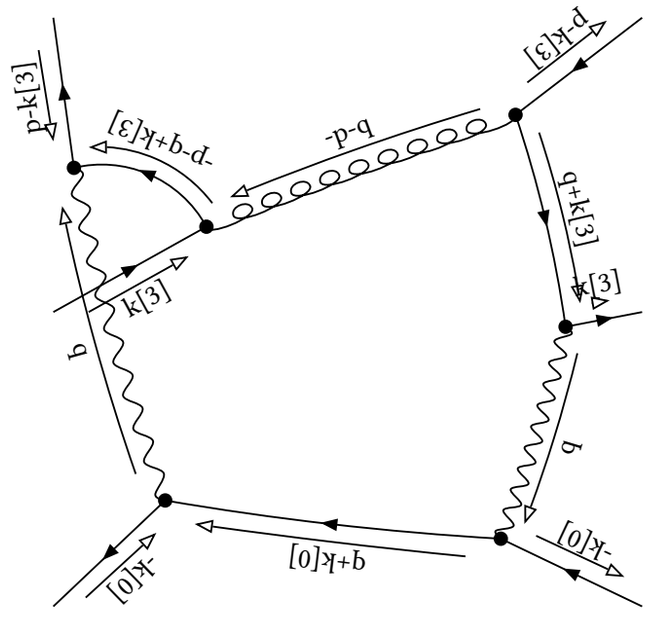
```
1/2 prop[0,k[3]]^-1 prop[0,p+k[3]]^-1 prop[0,q+k[3]]^-1 dot[p,p]^-1 dot[p,q]^-1
  -1/2 prop[0,k[3]]^-1 prop[0,p+k[3]]^-1 prop[0,p+q+k[3]]^-1 dot[p,p]^-1 dot[p,q]^-1
  -1/2 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+q+k[3]]^-1 dot[p,p]^-1 dot[p,q]^-1
  +1/2 prop[0,p+k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+q+k[3]]^-1 dot[p,p]^-1 dot[p,q]^-1
```



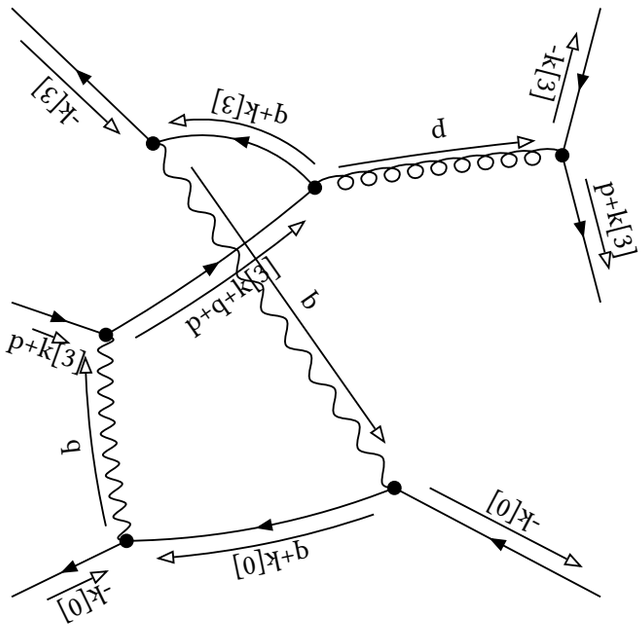
−3+15-17



−3+9



−3+13-15

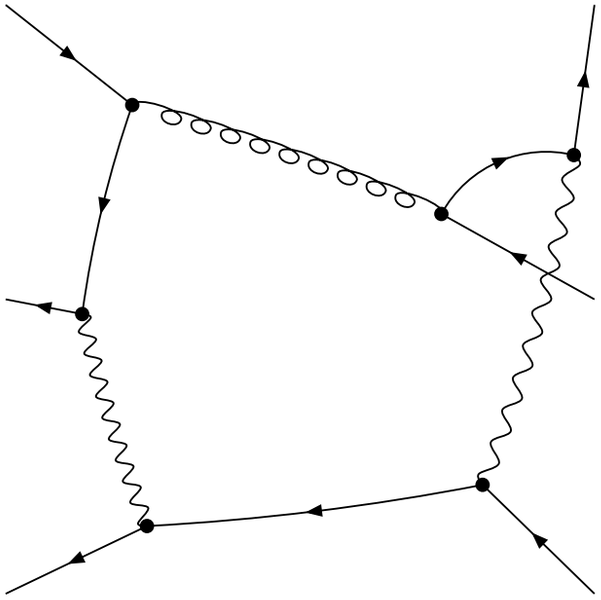


−3+11-13

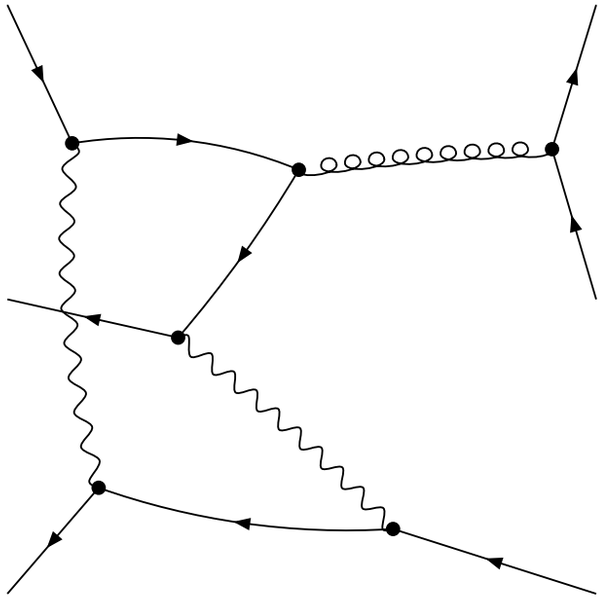
final

Denominator:

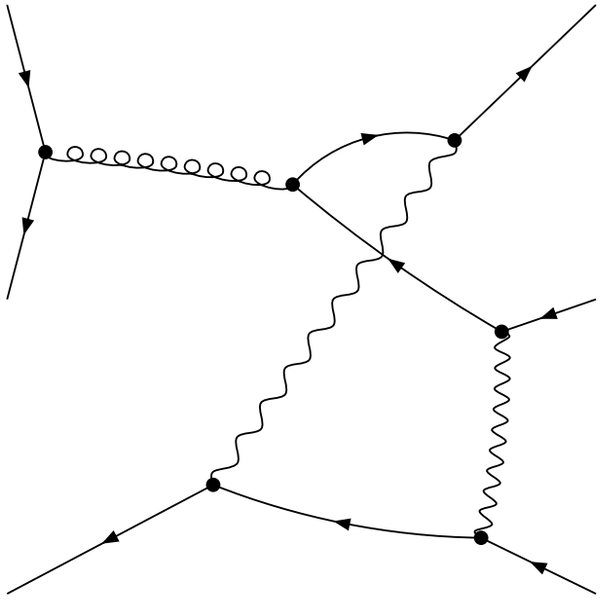
```
prop[0,k[3]]^-1 prop[0,p+k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p-q]^-1 prop[0,p-q+k[3]]^-1
```



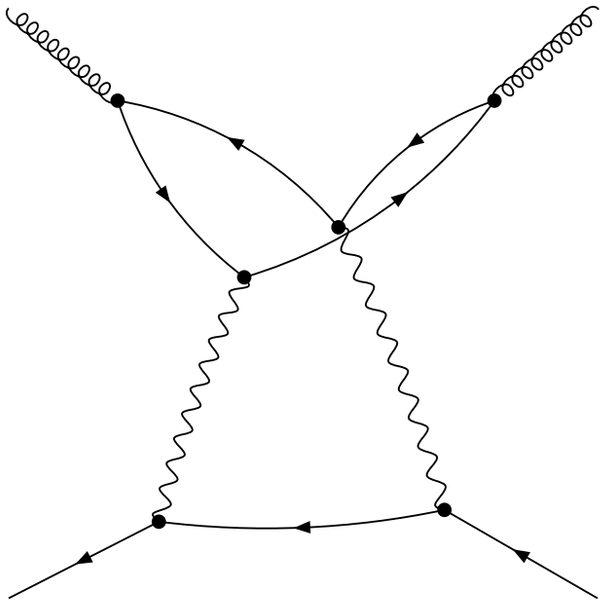
−1-13+15



−1-15+17



−1-11+13



−1-9

embedding 12 [1, 0, −1, 1]

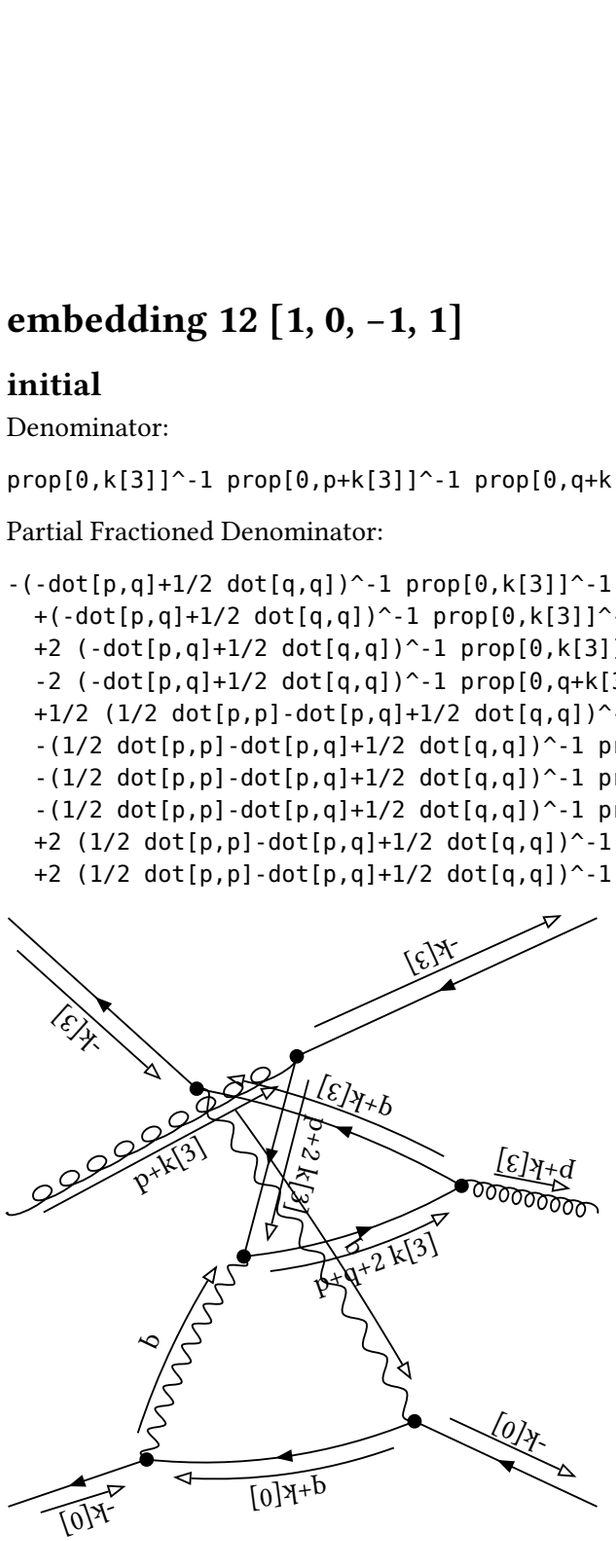
initial

Denominator:

```
prop[0,k[3]]^-1 prop[0,p+k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+2 k[3]]^-1 prop[0,p+q+2 k[3]]^-1
```

Partial Fractioned Denominator:

```
-(-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+2 k[3]]^-1 dot[p,p]^-1
  +(-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+q+2 k[3]]^-1 dot[p,p]^-1
  +2 (-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,p+2 k[3]]^-1 prop[0,p+q+2 k[3]]^-1 dot[p,p]^-1
  -2 (-dot[p,q]+1/2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,p+2 k[3]]^-1 prop[0,p+q+2 k[3]]^-1 dot[p,p]^-1
  +1/2 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,p+k[3]]^-1 prop[0,q+k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,p+k[3]]^-1 prop[0,p+q+2 k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+q+2 k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,p+k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+2 k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,p+k[3]]^-1 prop[0,p+2 k[3]]^-1 prop[0,p+q+2 k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]-dot[p,q]+1/2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,p+2 k[3]]^-1 prop[0,p+q+2 k[3]]^-1 dot[p,p]^-1
```

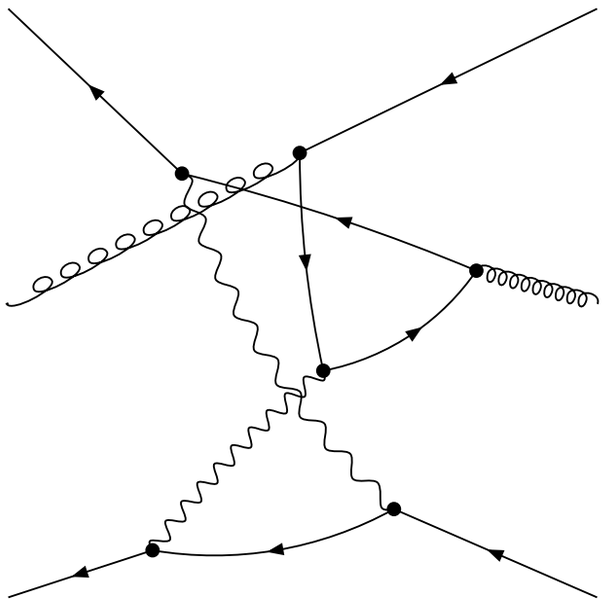


−3+9-13

final

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-1/2 p+1/2 q+1/2 k[3]]^-1 prop[0,-1/2 p-1/2 q+1/2 k[3]]^-1 prop[0,-1/2 p-1/2 q-1/2 k[3]]^-1
```



−1-9-15

embedding 13 [1, 0, 0, 0]

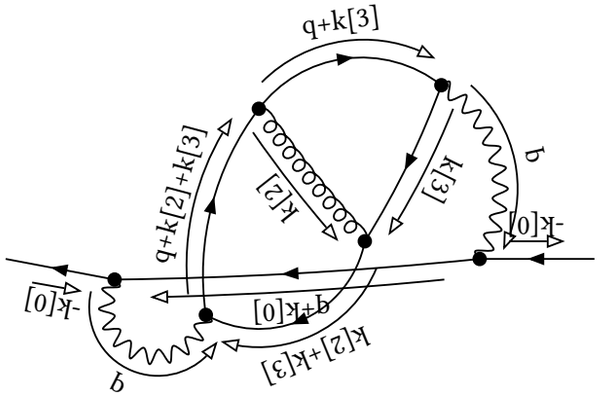
initial

Denominator:

```
prop[0,k[2]]^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,k[2]+k[3]]^-1 prop[0,q+k[2]+k[3]]^-1
```

Partial Fractioned Denominator:

```
prop[0,k[2]]^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,k[2]+k[3]]^-1 prop[0,q+k[2]+k[3]]^-1
```

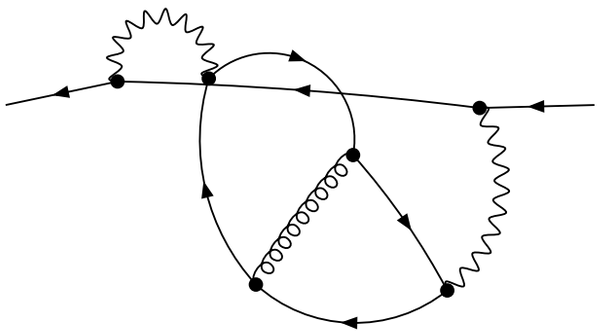


−3

final

Denominator:

```
prop[0,k[2]]^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,k[2]+k[3]]^-1 prop[0,q+k[2]+k[3]]^-1
```



−1

embedding 14 [1, 0, 0, 1]

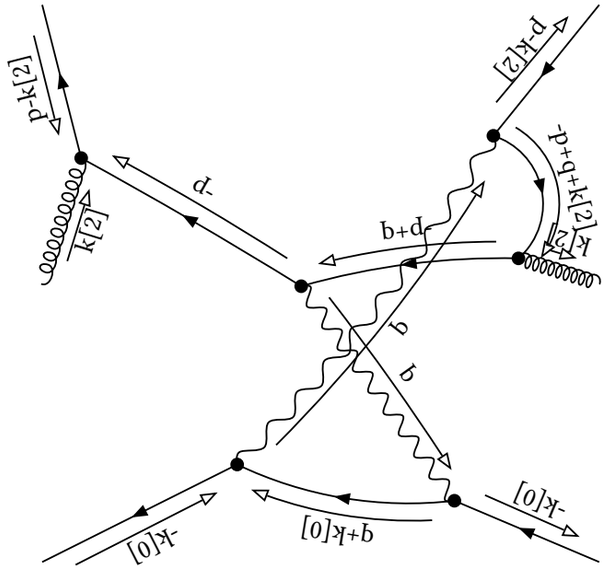
initial

Denominator:

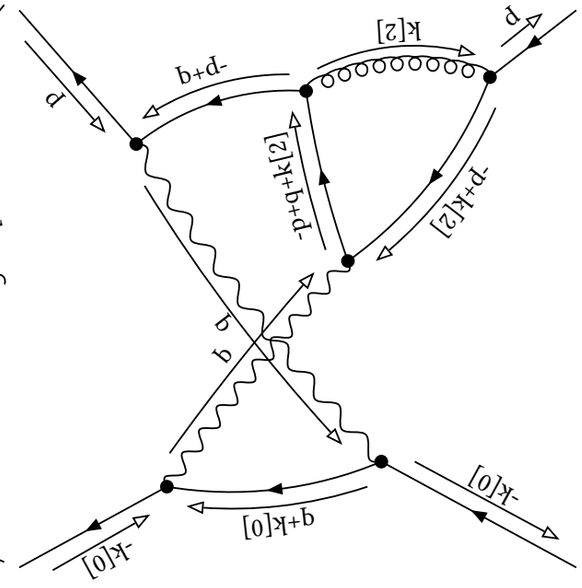
```
prop[0,k[2]]^-1 prop[0,-p]^-1 prop[0,-p+q]^-1 prop[0,-p+k[2]]^-1 prop[0,-p+q+k[2]]^-1
```

Partial Fractioned Denominator:

```
(dot[p,p]-2 dot[p,q]+dot[q,q])^-1 prop[0,k[2]]^-1 prop[0,-p+k[2]]^-1 prop[0,-p+q+k[2]]^-1 dot[p,p]^-1
```



–3+9-11

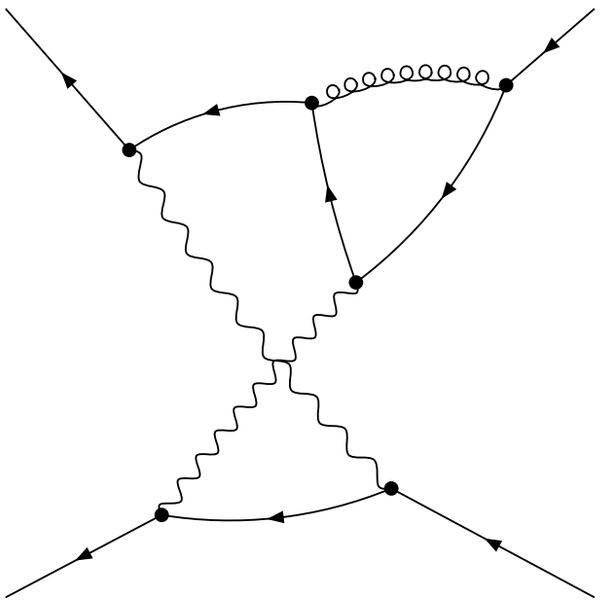


–3-13

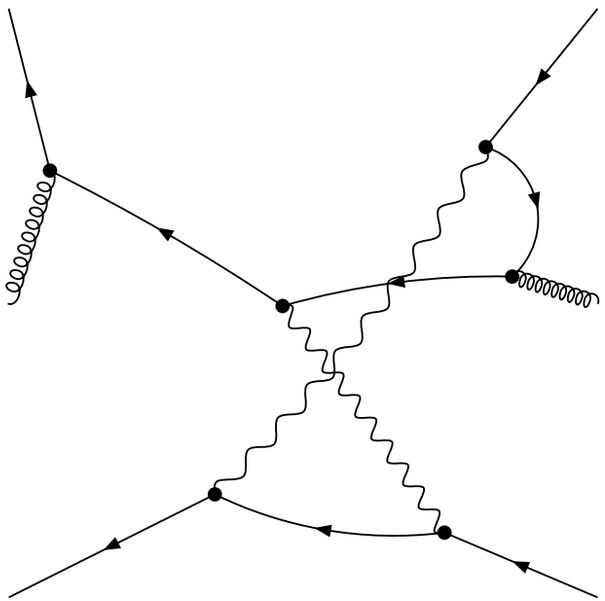
final

Denominator:

```
prop[0,k[3]]^-1 prop[0,-p]^-1 prop[0,q+k[3]]^-1 prop[0,-p-q]^-1 prop[0,-p-q-k[3]]^-1
```



−1-15



−1-9-17

embedding 15 [1, 0, 1, 0]

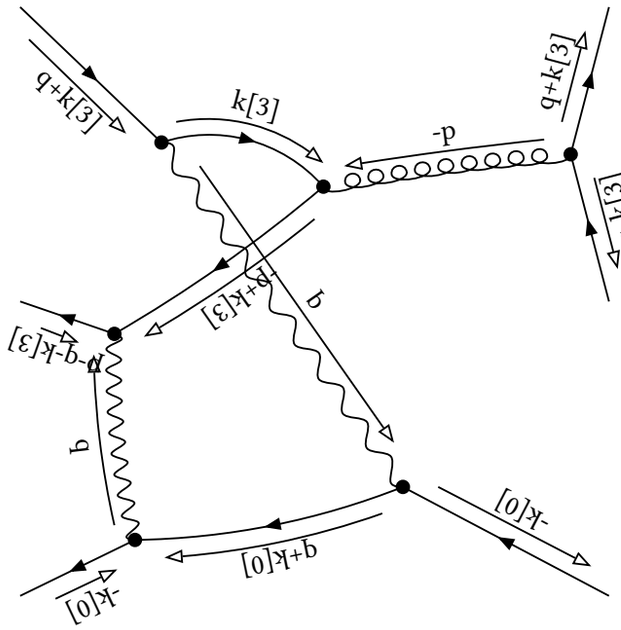
initial

Denominator:

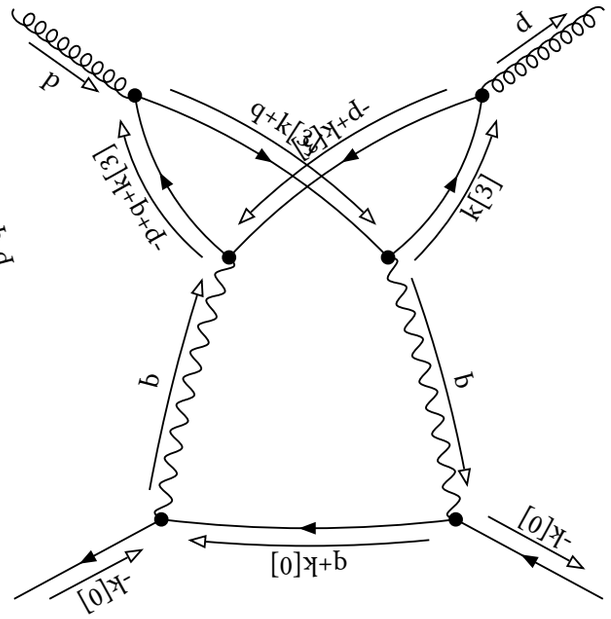
```
prop[0,k[3]]^-1 prop[0,-p]^-1 prop[0,q+k[3]]^-1 prop[0,-p+k[3]]^-1 prop[0,-p+q+k[3]]^-1
```

Partial Fractioned Denominator:

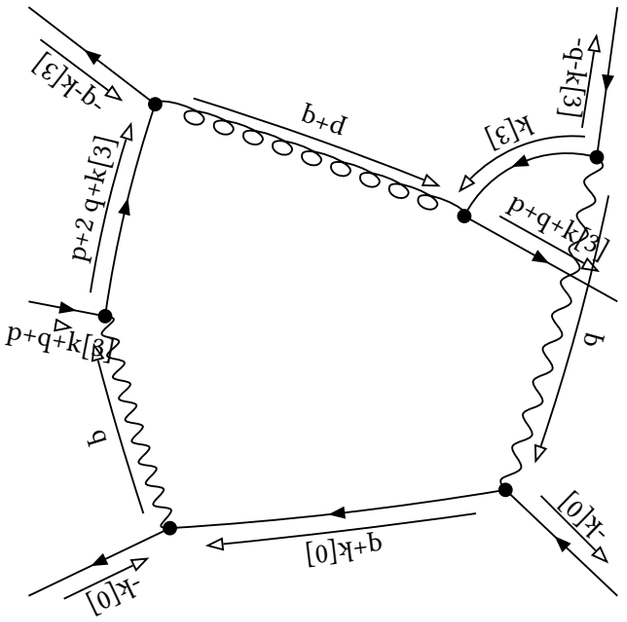
```
-1/2 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+k[3]]^-1 dot[p,p]^-1 dot[p,q]^-1
  +1/2 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+q+k[3]]^-1 dot[p,p]^-1 dot[p,q]^-1
  +1/2 prop[0,k[3]]^-1 prop[0,-p+k[3]]^-1 prop[0,-p+q+k[3]]^-1 dot[p,p]^-1 dot[p,q]^-1
  -1/2 prop[0,q+k[3]]^-1 prop[0,-p+k[3]]^-1 prop[0,-p+q+k[3]]^-1 dot[p,p]^-1 dot[p,q]^-1
```



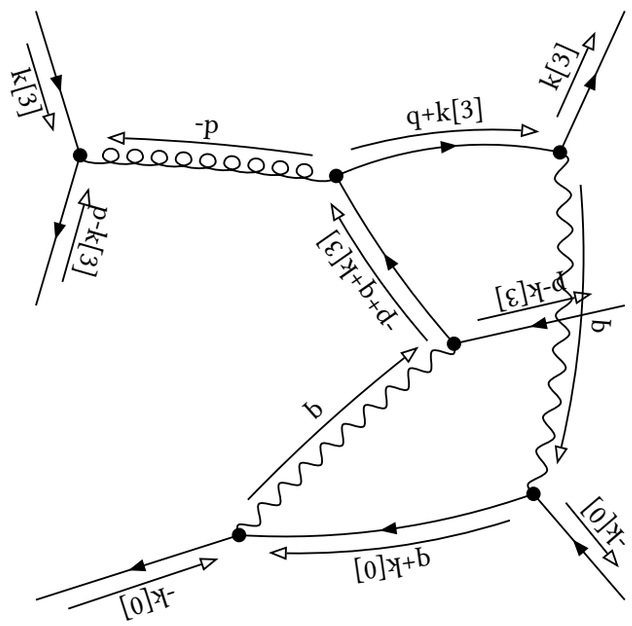
−3-15+17



−3-9



−3+11-17

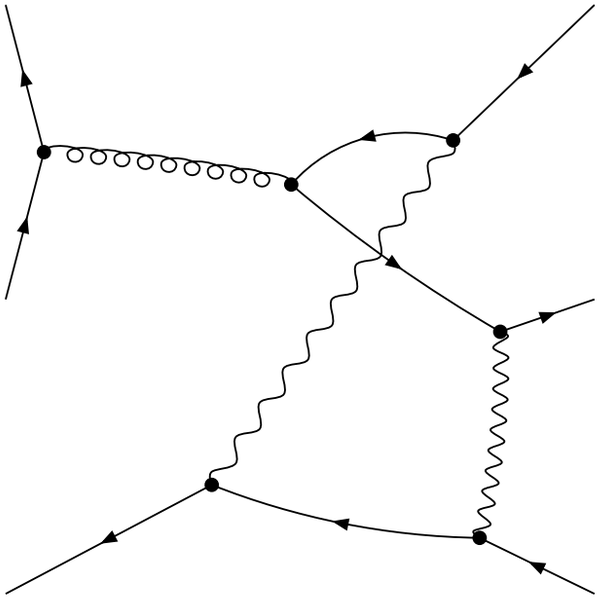


−3-11+13

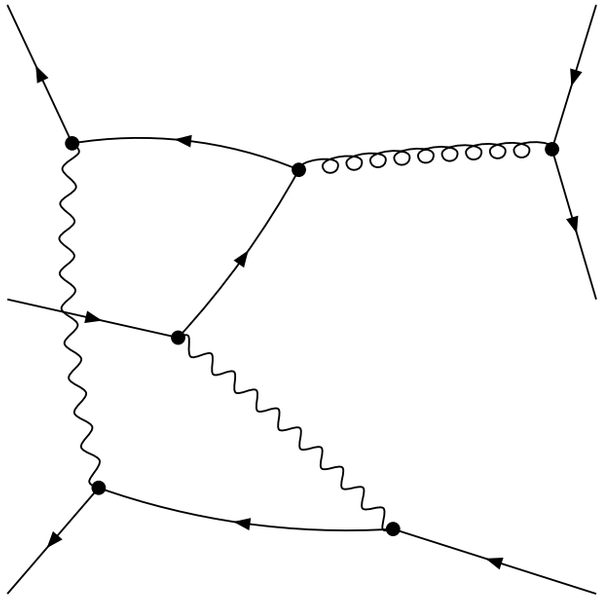
final

Denominator:

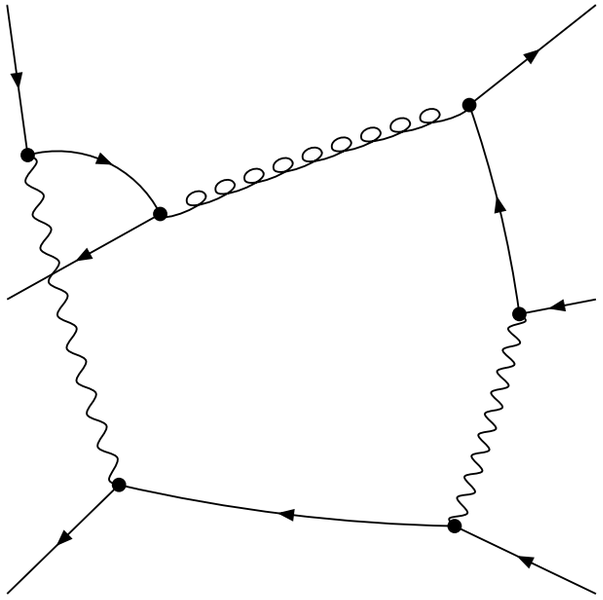
```
prop[0,p]^-1 prop[0,k[3]]^-1 prop[0,p+k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+q+k[3]]^-1
```



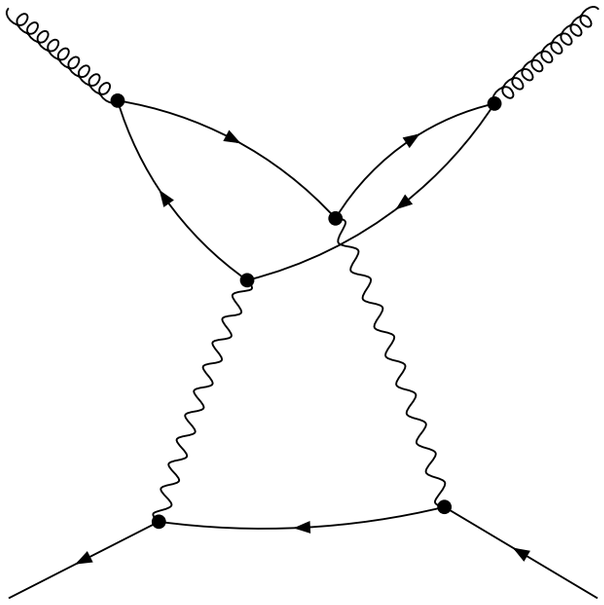
−1+15-17



−1+11-13



−1-11+17



−1+9

embedding 16 [1, 0, 1, 1]

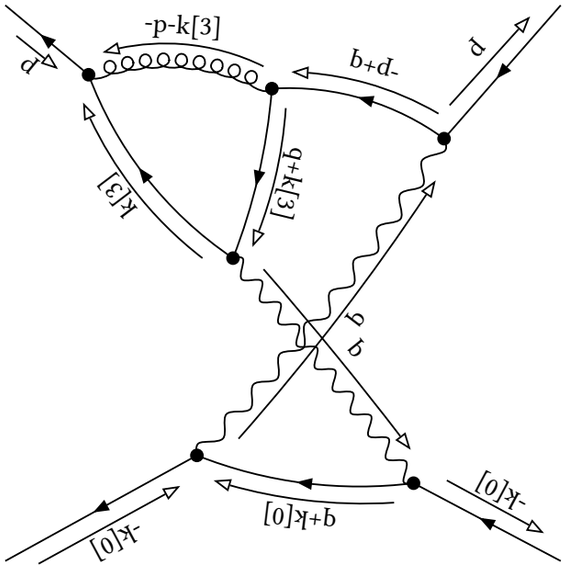
initial

Denominator:

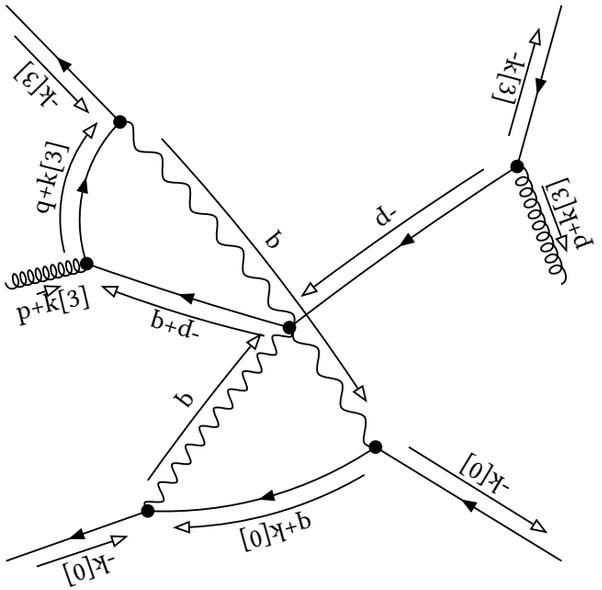
```
prop[0,k[3]]^-1 prop[0,-p]^-1 prop[0,q+k[3]]^-1 prop[0,-p+q]^-1 prop[0,-p-k[3]]^-1
```

Partial Fractioned Denominator:

```
(dot[p,p]-2 dot[p,q]+dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p-k[3]]^-1 dot[p,p]^-1
```



–3-11

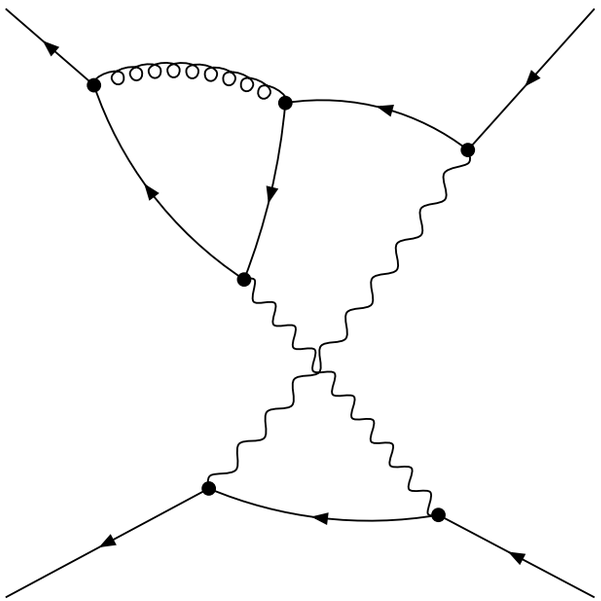


–3-9-13

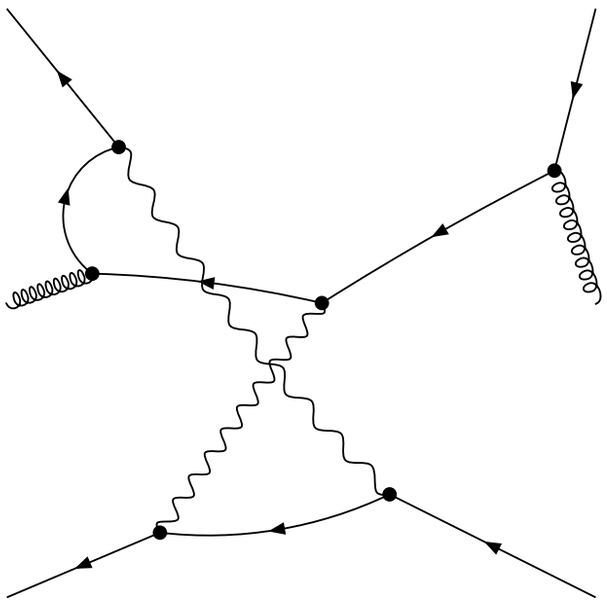
final

Denominator:

```
prop[0,k[2]]^-1 prop[0,-p]^-1 prop[0,-p+k[2]]^-1 prop[0,-p-q]^-1 prop[0,-p-q+k[2]]^-1
```



−1-17



−1+9-15

embedding 17 [1, 0, 1, 2]

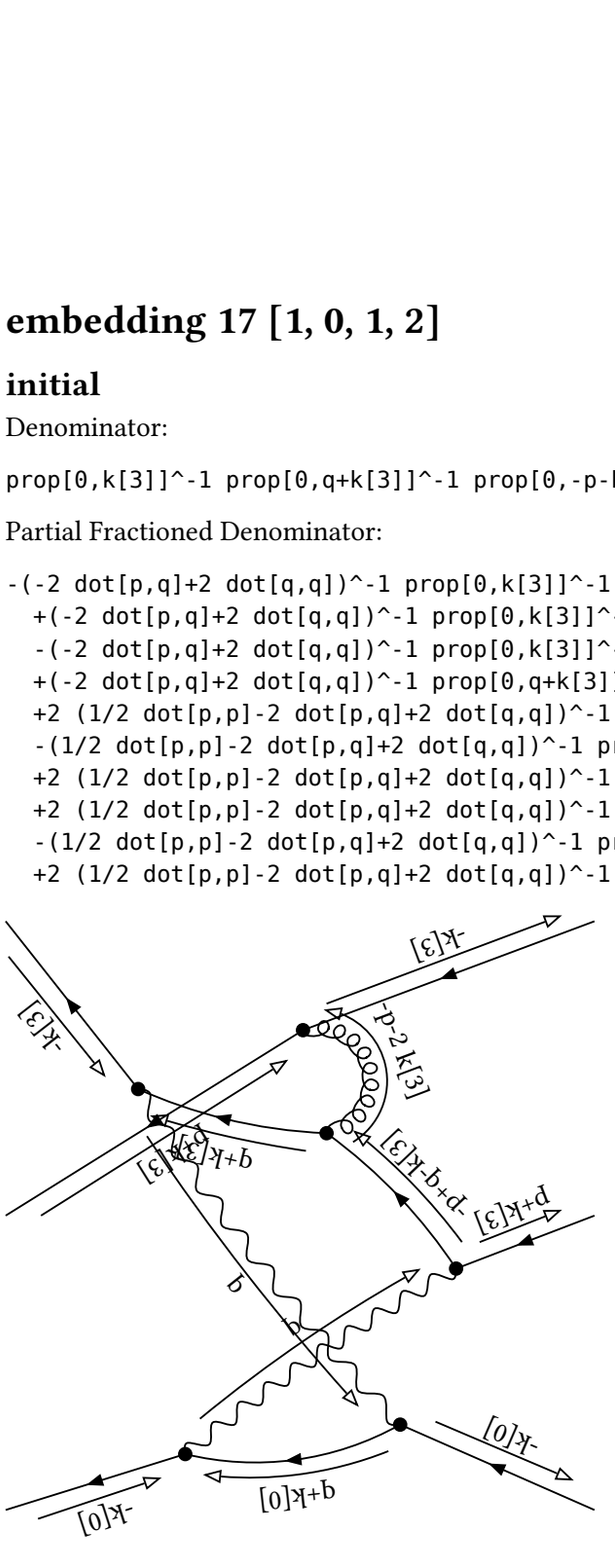
initial

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p-k[3]]^-1 prop[0,-p-2 k[3]]^-1 prop[0,-p+q-k[3]]^-1
```

Partial Fractioned Denominator:

```
-(-2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p-k[3]]^-1 dot[p,p]^-1
  +(-2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+q-k[3]]^-1 dot[p,p]^-1
  -(-2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,-p-k[3]]^-1 prop[0,-p+q-k[3]]^-1 dot[p,p]^-1
  +(-2 dot[p,q]+2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-p-k[3]]^-1 prop[0,-p+q-k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p-2 k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p+q-k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,-p-2 k[3]]^-1 prop[0,-p+q-k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-p-k[3]]^-1 prop[0,-p-2 k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-p-k[3]]^-1 prop[0,-p+q-k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]-2 dot[p,q]+2 dot[q,q])^-1 prop[0,-p-k[3]]^-1 prop[0,-p-2 k[3]]^-1 prop[0,-p+q-k[3]]^-1 dot[p,p]^-1
```

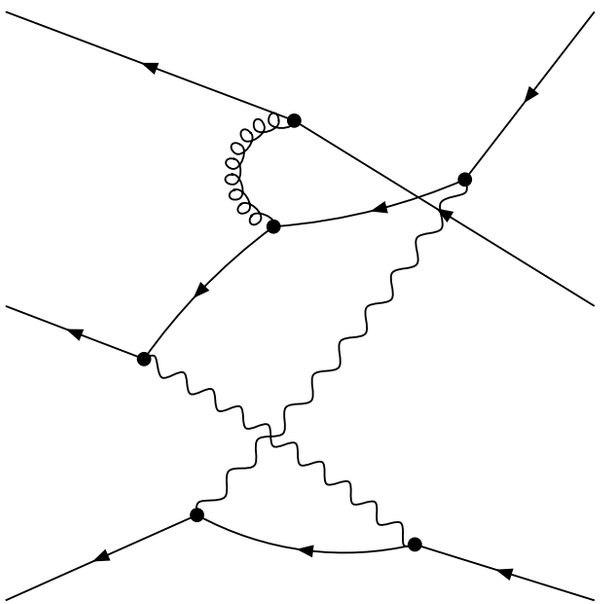


–3-11-13

final

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p-q-k[3]]^-1 prop[0,-p-2 q-k[3]]^-1 prop[0,-p-2 q-2 k[3]]^-1
```



−1-15-17

embedding 18 [1, 0, 2, 1]

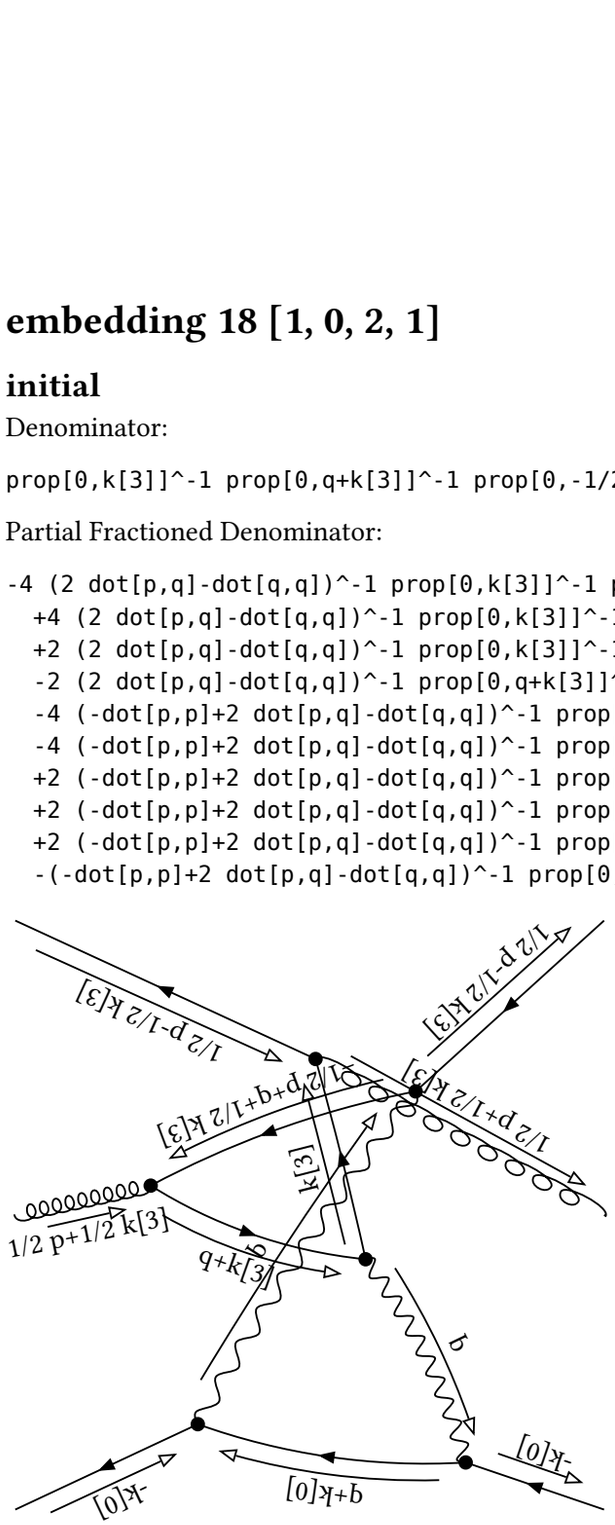
initial

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-1/2 p+1/2 k[3]]^-1 prop[0,-1/2 p-1/2 k[3]]^-1 prop[0,-1/2 p+q+1/2 k[3]]^-1
```

Partial Fractioned Denominator:

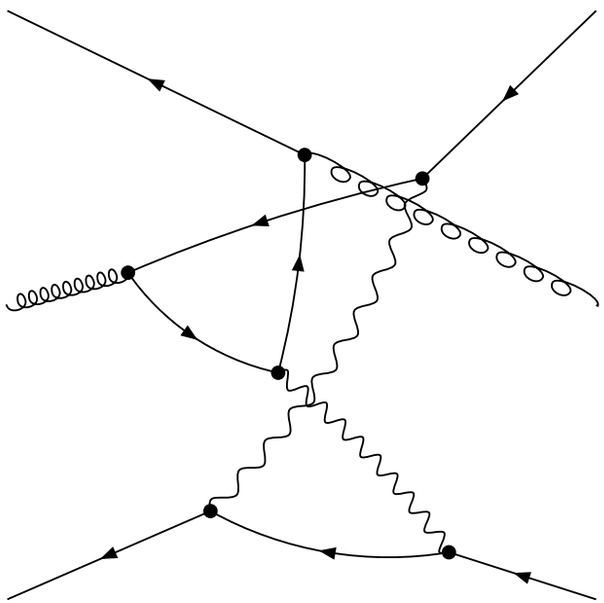
```
-4 (2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-1/2 p+1/2 k[3]]^-1 dot[p,p]^-1
  +4 (2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
  +2 (2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,-1/2 p+1/2 k[3]]^-1 prop[0,-1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
  -2 (2 dot[p,q]-dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-1/2 p+1/2 k[3]]^-1 prop[0,-1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
  -4 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-1/2 p-1/2 k[3]]^-1 dot[p,p]^-1
  -4 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
  +2 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,-1/2 p-1/2 k[3]]^-1 prop[0,-1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
  +2 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-1/2 p+1/2 k[3]]^-1 prop[0,-1/2 p-1/2 k[3]]^-1 dot[p,p]^-1
  +2 (-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-1/2 p+1/2 k[3]]^-1 prop[0,-1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
  -(-dot[p,p]+2 dot[p,q]-dot[q,q])^-1 prop[0,-1/2 p+1/2 k[3]]^-1 prop[0,-1/2 p-1/2 k[3]]^-1 prop[0,-1/2 p+q+1/2 k[3]]^-1 dot[p,p]^-1
```



final

Denominator:

```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+q+k[3]]^-1 prop[0,p+q+2 k[3]]^-1 prop[0,p+2 q+2 k[3]]^-1
```



−1+9-17

embedding 19 [1, 1, −1, 1]

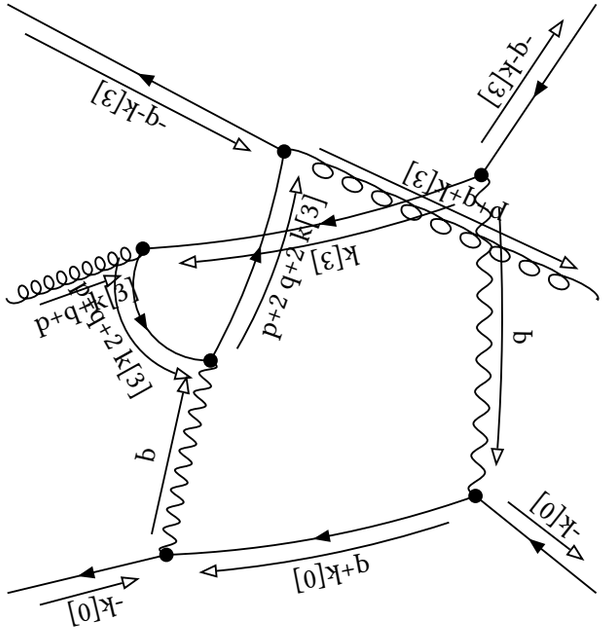
initial

Denominator:

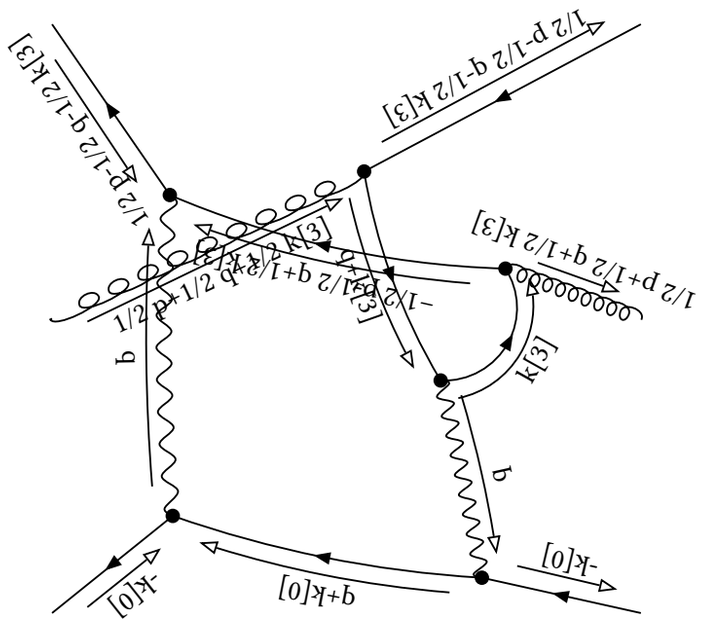
```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+q+k[3]]^-1 prop[0,p+q+2 k[3]]^-1 prop[0,p+2 q+2 k[3]]^-1
```

Partial Fractioned Denominator:

```
-1/2 (-dot[p,q]-1/2 dot[q,q])^-1 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+q+2 k[3]]^-1
  +1/2 (-dot[p,q]-1/2 dot[q,q])^-1 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+2 q+2 k[3]]^-1
  +(-dot[p,q]-1/2 dot[q,q])^-1 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,p+q+2 k[3]]^-1 prop[0,p+2 q+2 k[3]]^-1
  -(-dot[p,q]-1/2 dot[q,q])^-1 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,p+q+2 k[3]]^-1 prop[0,p+2 q+2 k[3]]^-1
  +1/2 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+q+k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+2 q+2 k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,p+q+k[3]]^-1 prop[0,p+2 q+2 k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,p+q+k[3]]^-1 prop[0,p+q+2 k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,p+q+2 k[3]]^-1 prop[0,p+2 q+2 k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]+dot[p,q]+1/2 dot[q,q])^-1 prop[0,p+q+k[3]]^-1 prop[0,p+q+2 k[3]]^-1 prop[0,p+2 q+2 k[3]]^-1 dot[p,p]^-1
```



−3+9-17

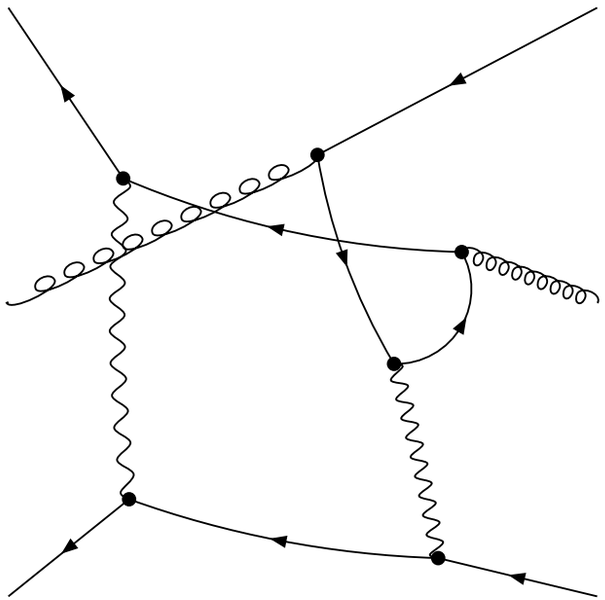


−3-9-15

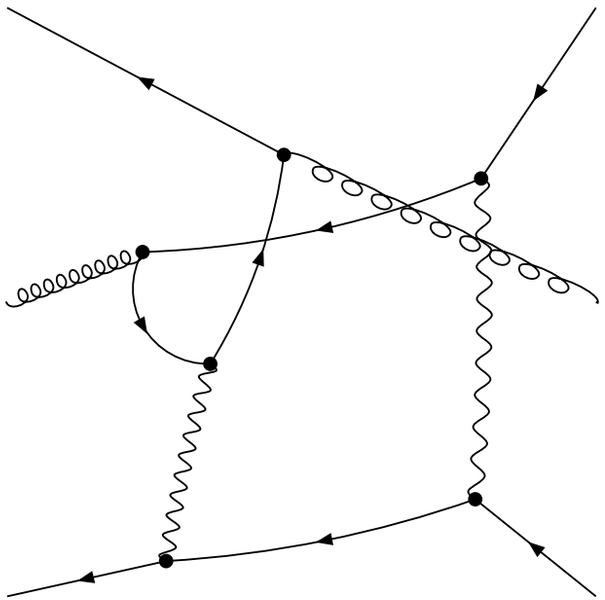
final

Denominator:

```
prop[0,k[3]]^-1 prop[0,p+k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,p+2 k[3]]^-1 prop[0,p+q+2 k[3]]^-1
```



−1+9-13



−1-9-11

embedding 20 [1, 1, 0, 1]

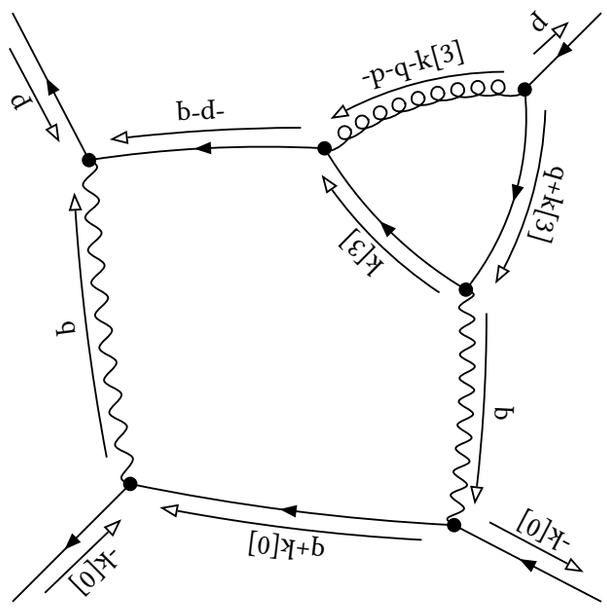
initial

Denominator:

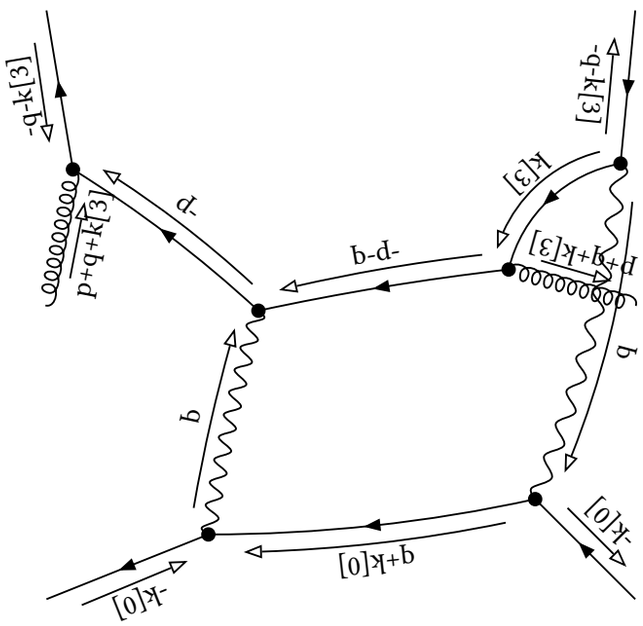
```
prop[0,k[3]]^-1 prop[0,-p]^-1 prop[0,q+k[3]]^-1 prop[0,-p-q]^-1 prop[0,-p-q-k[3]]^-1
```

Partial Fractioned Denominator:

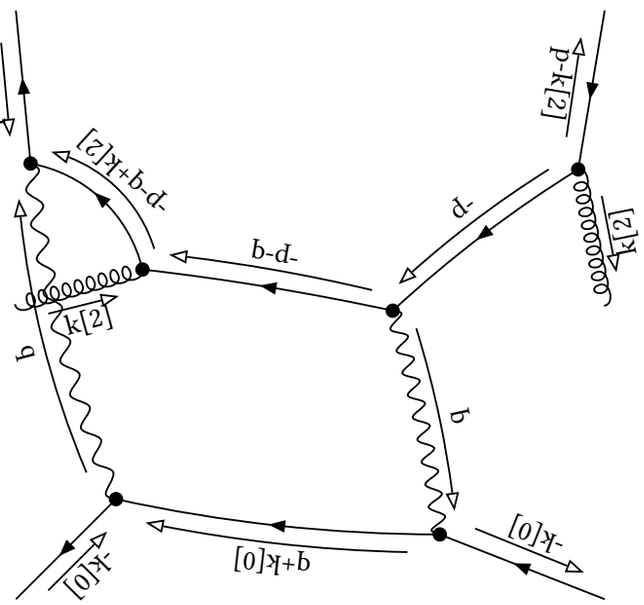
```
(dot[p,p]+2 dot[p,q]+dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p-q-k[3]]^-1 dot[p,p]^-1
```



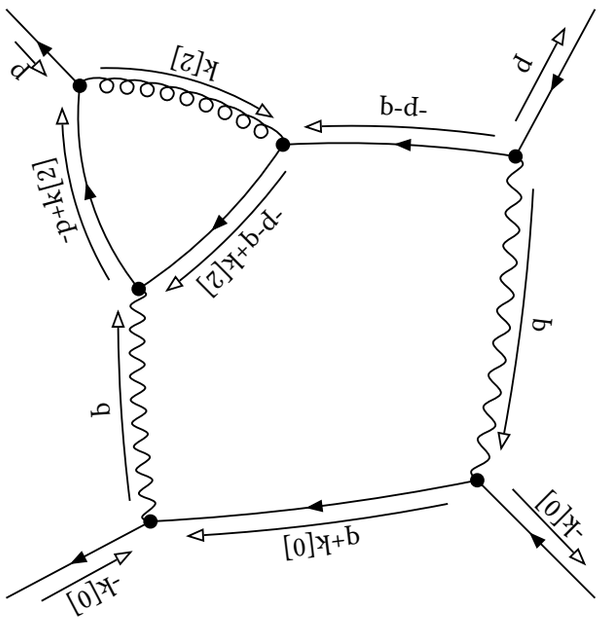
−3-15



−3-9-17



−3+9-15

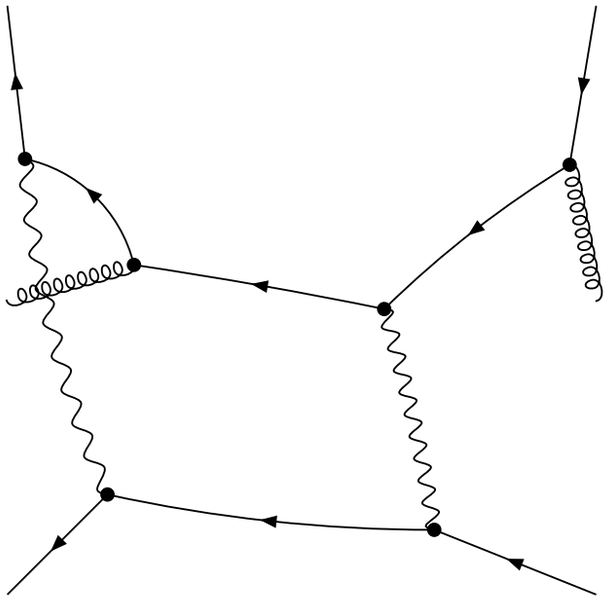


−3-17

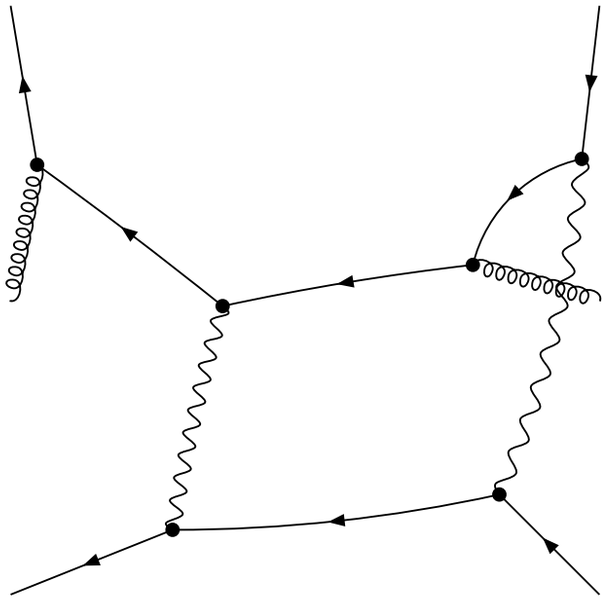
final

Denominator:

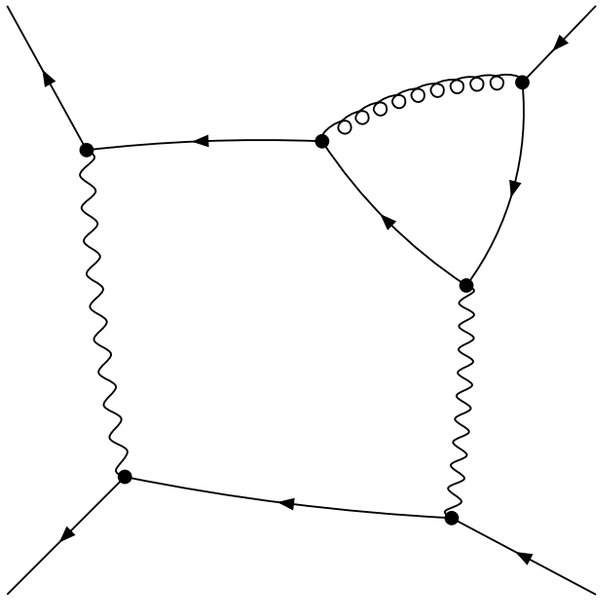
```
prop[0,k[3]]^-1 prop[0,-p]^-1 prop[0,q+k[3]]^-1 prop[0,-p+q]^-1 prop[0,-p-k[3]]^-1
```



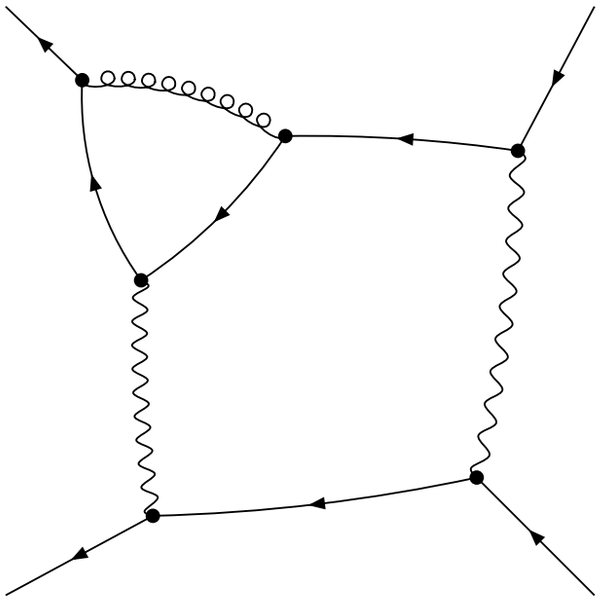
−1-9-13



−1+9-11



−1-13



−1-11

embedding 21 [1, 1, 1, 2]

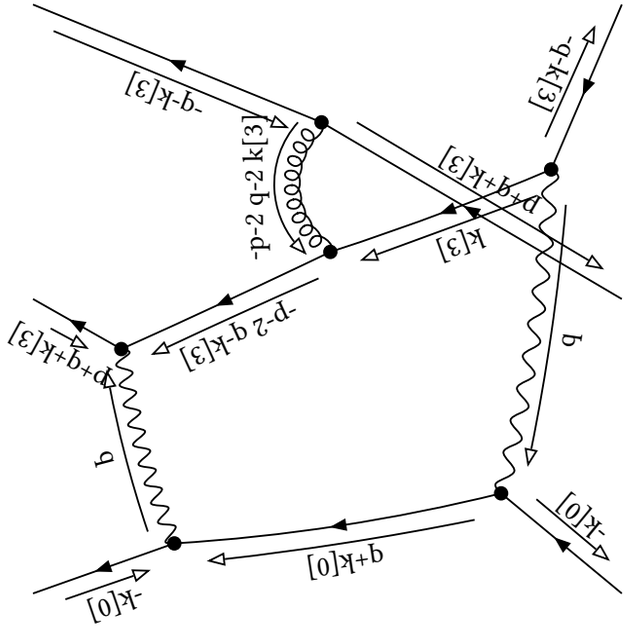
initial

Denominator:

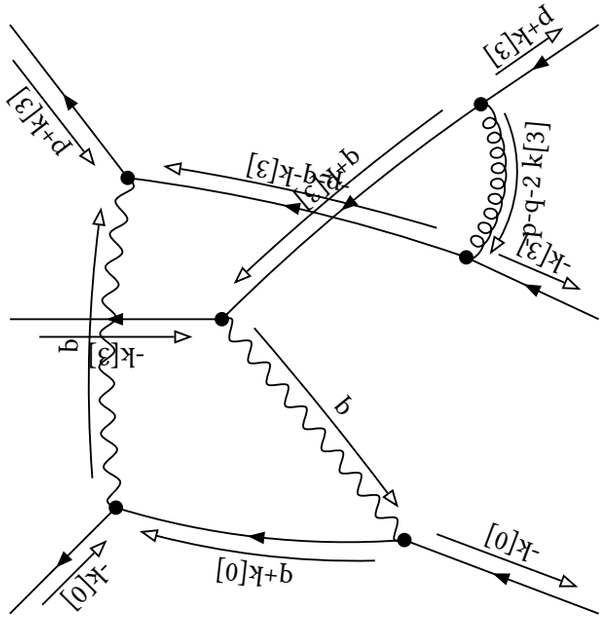
```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p-q-k[3]]^-1 prop[0,-p-2 q-k[3]]^-1 prop[0,-p-2 q-2 k[3]]^-1
```

Partial Fractioned Denominator:

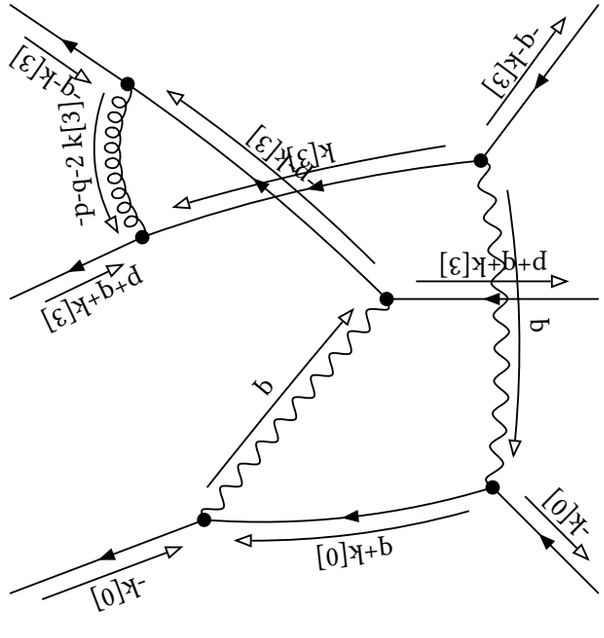
```
1/2 (-2 dot[p,q]-2 dot[q,q])^-1 (1/2 dot[p,p]+2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p-q-k[3]]^-1
  -1/2 (-2 dot[p,q]-2 dot[q,q])^-1 (1/2 dot[p,p]+2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p-2 q-k[3]]^-1
  -1/2 (-2 dot[p,q]-2 dot[q,q])^-1 (1/2 dot[p,p]+2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,-p-q-k[3]]^-1 prop[0,-p-2 q-k[3]]^-1
  +1/2 (-2 dot[p,q]-2 dot[q,q])^-1 (1/2 dot[p,p]+2 dot[p,q]+2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-p-q-k[3]]^-1 prop[0,-p-2 q-k[3]]^-1
  -(1/2 dot[p,p]+2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p-q-k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]+2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p-2 q-2 k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]+2 dot[p,q]+2 dot[q,q])^-1 prop[0,k[3]]^-1 prop[0,-p-q-k[3]]^-1 prop[0,-p-2 q-2 k[3]]^-1 dot[p,p]^-1
  -(1/2 dot[p,p]+2 dot[p,q]+2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-p-q-k[3]]^-1 prop[0,-p-2 q-k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]+2 dot[p,q]+2 dot[q,q])^-1 prop[0,q+k[3]]^-1 prop[0,-p-2 q-k[3]]^-1 prop[0,-p-2 q-2 k[3]]^-1 dot[p,p]^-1
  +2 (1/2 dot[p,p]+2 dot[p,q]+2 dot[q,q])^-1 prop[0,-p-q-k[3]]^-1 prop[0,-p-2 q-k[3]]^-1 prop[0,-p-2 q-2 k[3]]^-1 dot[p,p]^-1
```



−3-15-17



−3-13-15

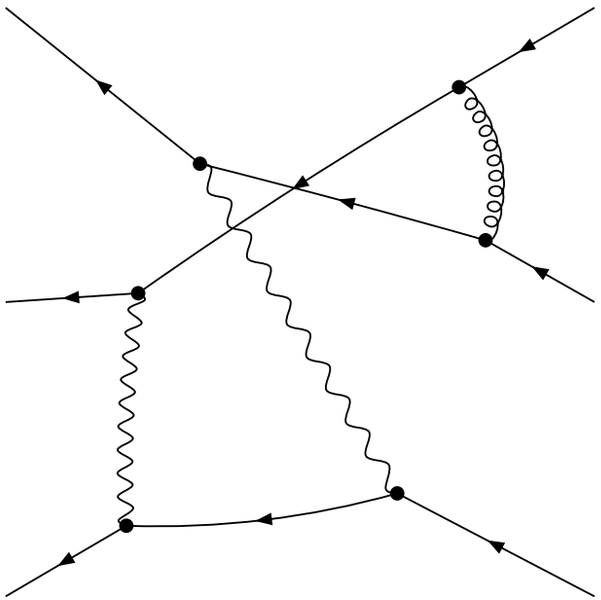


−3-11-17

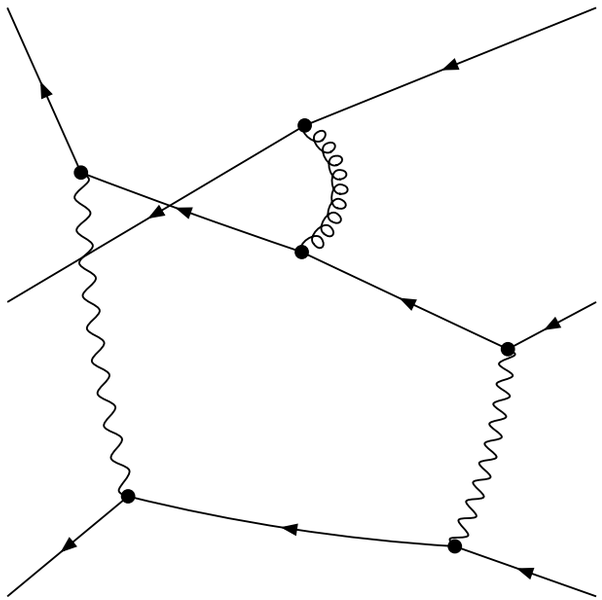
final

Denominator:

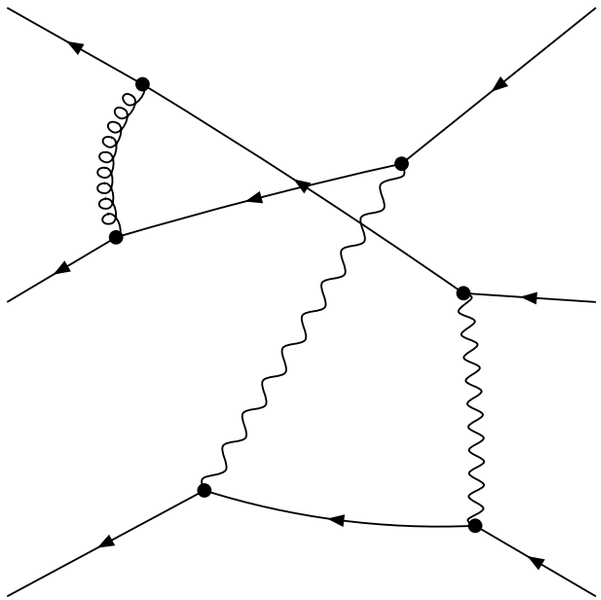
```
prop[0,k[3]]^-1 prop[0,q+k[3]]^-1 prop[0,-p-k[3]]^-1 prop[0,-p-q-k[3]]^-1 prop[0,-p-q-2 k[3]]^-1
```



−1-13-15



−1-11-13



−1-11-17