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#####
### File "g2_talevv_talodd";
#####
#####
## Factorisation:
## tal=mu(talevv,talodd)

## Odd factor: Can be defined by its mu-logarithm
## talodd:=expari(-1/2*Qa+lutalodd) with lutalodd in LU^+(Qa,c*I)
## or by its der-mu-dilator detalodd:
## der.talodd=mu(talodd,dertalodd).
## We settle for the latter choice.

## Even factor and subfactors:
## talevv=mu(tal_levv,tal_revv)
## calculable from them dilators
## tal_levv ==> dutal_levv (in LU^-(Qa,c*I)/c)
## tal_revv ==> detal_revv (in LU^+(Qa,c*I) )

## LU(Qa,c*I) has two natural bases. We chose the one spanned by the alternate bimoulds Qa_[n1,...,n.s] with
## Qa_[n1,...,n.s] :=lu( Qa_n1, ... , Qa_n.s ) ( with left-to-right bracketing)
## Qa_n := lu(c*I, Qa, ... , Qa) ( with left-to-right bracketing and Qa repeated (n-1) times)

## The odd factors talodd is defined here (up to length r=10) by its dilators' coefficients
## kodetalodd[n1,...,n.s] in that natural basis.

## The even subfactors tal_levv and tal_revv are defined (up to length r=10) by their dilators' coefficients
## kodutal_levv[n1,...,n.s] and kodetal_revv[n1,...,n.s] in the same basis.

### NB: The coefficients xx4 at length 8 and xx5 at length 10 in the following tables express the latitude
### that results from the possibility of gari-postcomposing tal by an regular trigonometric bisymmetral Za.

#####
#####
### Coefficients of the dilators detalodd, dutal_lev, detal_rev of talodd, tal_levv and tal_revv:

##### length r=1:
kodetalodd[] = -1/2,

##### length r=2:
## no coefficients for detalodd or detal_revv at length 2.

kodutal_levv[2] = -1/24,

##### length r=3:
kodetalodd[2,1] = 1/16,

##### length r=4:
kodetalodd[3,1] = -1/96,

kodutal_levv[4] = 7/5760,
kodutal_levv[2,1,1] = -1/640,

kodetal_revv[3,1] = 11/480,

##### length r=5:
kodetalodd[4,1] = 1/144,
kodetalodd[3,2] = 5/576,
kodetalodd[2,1,1,1] = 19/2304,

##### length r=6:
kodetalodd[5,1] = -29/23040,
kodetalodd[4,2] = -11/3840,
kodetalodd[3,1,1,1] = -19/11520,
kodetalodd[2,1,2,1] = -19/5760,

kodutal_levv[6] = -31/967680,
kodutal_levv[4,1,1] = 73/483840,
kodutal_levv[3,2,1] = 31/725760,
kodutal_levv[3,1,2] = 53/322560,

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$\text{kodutal_levv}[2,1,1,1,1] = -79/967680,$

$\text{kodetal_revv}[5,1] = -47/32256,$
 $\text{kodetal_revv}[4,2] = -2053/967680,$
 $\text{kodetal_revv}[3,1,1,1] = 47/16128,$
 $\text{kodetal_revv}[2,1,2,1] = 1517/322560,$

length r=7:

$\text{kodetalodd}[6,1] = -13/138240,$
 $\text{kodetalodd}[5,2] = -17/82944,$
 $\text{kodetalodd}[4,3] = -11/207360,$
 $\text{kodetalodd}[4,1,1,1] = 1/1152,$
 $\text{kodetalodd}[3,2,1,1] = -173/207360,$
 $\text{kodetalodd}[3,1,2,1] = 31/6912,$
 $\text{kodetalodd}[3,1,1,2] = 13/8640,$
 $\text{kodetalodd}[1,2,2,2] = -217/103680,$
 $\text{kodetalodd}[2,1,1,1,1,1] = 55/55296,$

length r=8:

$\text{kodetalodd}[7,1] = 149/3870720,$
 $\text{kodetalodd}[6,2] = 23/161280,$
 $\text{kodetalodd}[5,3] = 29/184320,$
 $\text{kodetalodd}[5,1,1,1] = -125/774144,$
 $\text{kodetalodd}[4,2,1,1] = -1/138240,$
 $\text{kodetalodd}[4,1,2,1] = -59/60480,$
 $\text{kodetalodd}[4,1,1,2] = -13/26880,$
 $\text{kodetalodd}[3,1,3,1] = -733/645120,$
 $\text{kodetalodd}[3,2,2,1] = -509/483840,$
 $\text{kodetalodd}[3,2,1,2] = 11/10752,$
 $\text{kodetalodd}[3,1,2,2] = -251/107520,$
 $\text{kodetalodd}[3,1,1,1,1,1] = -55/258048,$
 $\text{kodetalodd}[2,1,2,1,1,1] = -173/967680,$
 $\text{kodetalodd}[2,1,1,1,2,1] = -163/241920,$

$\text{kodutal_levv}[8] = 127/154828800,$
 $\text{kodutal_levv}[6,1,1] = -3881/464486400,$
 $\text{kodutal_levv}[5,2,1] = -5/27869184\text{-xx}4,$
 $\text{kodutal_levv}[5,1,2] = -6451/464486400,$
 $\text{kodutal_levv}[4,3,1] = 5429/278691840\text{-}3/2\text{*xx}4,$
 $\text{kodutal_levv}[4,1,3] = -17/819200,$
 $\text{kodutal_levv}[4,2,2] = -7421/199065600\text{+xx}4,$
 $\text{kodutal_levv}[3,2,3] = -3047/696729600\text{-}1/2\text{*xx}4,$
 $\text{kodutal_levv}[4,1,1,1,1] = 5687/464486400,$
 $\text{kodutal_levv}[3,2,1,1,1] = -26987/348364800\text{+}9/2\text{*xx}4,$
 $\text{kodutal_levv}[3,1,2,1,1] = 153901/464486400\text{-}18\text{*xx}4,$
 $\text{kodutal_levv}[3,1,1,2,1] = -17117/232243200\text{+}9/2\text{*xx}4,$
 $\text{kodutal_levv}[3,1,1,1,2] = 3683/464486400,$
 $\text{kodutal_levv}[2,1,2,2,1] = +7013/87091200\text{-}9/2\text{*xx}4,$
 $\text{kodutal_levv}[2,1,2,1,2] = -27821/464486400\text{+}9/2\text{*xx}4,$
 $\text{kodutal_levv}[2,1,1,1,1,1] = -2339/464486400,$

$\text{kodetal_revv}[7,1] = 191/2764800,$
 $\text{kodetal_revv}[6,2] = 1571/4976640\text{-}8\text{*xx}4,$
 $\text{kodetal_revv}[5,3] = 18161/34836480\text{-}20\text{*xx}4,$
 $\text{kodetal_revv}[5,1,1,1] = -643/2764800,$
 $\text{kodetal_revv}[4,2,1,1] = -409/537600\text{+}36\text{*xx}4,$
 $\text{kodetal_revv}[4,1,2,1] = +323/201600\text{-}144\text{*xx}4,$
 $\text{kodetal_revv}[4,1,1,2] = -5317/5806080\text{+}36\text{*xx}4,$
 $\text{kodetal_revv}[3,1,3,1] = +229/215040\text{-}108\text{*xx}4,$
 $\text{kodetal_revv}[3,2,2,1] = +697/604800\text{-}108\text{*xx}4,$
 $\text{kodetal_revv}[3,2,1,2] = -12163/8709120\text{+}108\text{*xx}4,$
 $\text{kodetal_revv}[3,1,2,2] = +1859/774144\text{-}216\text{*xx}4,$
 $\text{kodetal_revv}[3,1,1,1,1,1] = 59/184320,$
 $\text{kodetal_revv}[2,1,2,1,1,1] = 18409/58060800,$
 $\text{kodetal_revv}[2,1,1,1,2,1] = 23843/29030400,$

length r=9:

$\text{kodetalodd}[8,1] = 193/38707200,$
 $\text{kodetalodd}[7,2] = 10373/116121600\text{-}9/2\text{*xx}4,$
 $\text{kodetalodd}[6,3] = 5287/19353600\text{-}63/4\text{*xx}4,$
 $\text{kodetalodd}[5,4] = 173/907200\text{-}45/4\text{*xx}4,$

kodetalodd[6,1,1,1] = -529/38707200,
 kodetalodd[5,2,1,1] = -4241/14515200+63/4*xx4,
 kodetalodd[5,1,2,1] = 12443/9676800-81*xx4,
 kodetalodd[5,1,1,2] = -679/1843200+81/4*xx4,
 kodetalodd[4,3,1,1] = -142741/116121600+297/4*xx4,
 kodetalodd[4,1,3,1] = 31949/9676800-405/2*xx4,
 kodetalodd[4,1,1,3] = -13651/38707200+81/4*xx4,
 kodetalodd[4,1,2,2] = 114923/38707200-729/4*xx4,
 kodetalodd[4,2,1,2] = -40207/23224320+405/4*xx4,
 kodetalodd[4,2,2,1] = 54923/29030400-117*xx4,
 kodetalodd[2,1,3,3] = 39043/7741440-1215/4*xx4,
 kodetalodd[2,3,1,3] = -811553/116121600+1701/4*xx4,
 kodetalodd[2,3,3,1] = 18311/19353600-117/2*xx4,
 kodetalodd[3,2,2,2] = -243/2*xx4+115513/58060800,
 kodetalodd[4,1,1,1,1,1] = 919/9676800,
 kodetalodd[3,2,1,1,1,1] = -3247/4838400+81/4*xx4,
 kodetalodd[3,1,2,1,1,1] = 2153/806400-81*xx4,
 kodetalodd[3,1,1,2,1,1] = -47183/38707200+81/4*xx4,
 kodetalodd[3,1,1,1,2,1] = 511/691200,
 kodetalodd[3,1,1,1,1,2] = 337/1612800,
 kodetalodd[2,1,2,2,1,1] = 10721/12902400-81/4*xx4,
 kodetalodd[2,1,2,1,2,1] = -9349/12902400+81/4*xx4,
 kodetalodd[2,1,2,1,1,2] = 6673/4838400,
 kodetalodd[2,1,1,1,1,1,1] = 11813/103219200,

length r=10:

kodetalodd[9,1] = -1109/619315200,
 kodetalodd[8,2] = -69359/2786918400+xx4,
 kodetalodd[7,3] = -5527/61931520+9/2*xx4,
 kodetalodd[6,4] = -103489/928972800+6*xx4,
 kodetalodd[7,1,1,1] = 863/154828800,
 kodetalodd[6,2,1,1] = 1699/23224320-7/2*xx4,
 kodetalodd[6,1,2,1] = 18*xx4-30637/116121600,
 kodetalodd[6,1,1,2] = 3839/38707200-9/2*xx4,
 kodetalodd[5,3,1,1] = 449989/1393459200-20*xx4,
 kodetalodd[5,1,3,1] = -73603/77414400+63*xx4,
 kodetalodd[5,1,1,3] = +691/3870720-9*xx4,
 kodetalodd[5,1,2,2] = -20017/25804800+54*xx4,
 kodetalodd[5,2,1,2] = 37657/69672960-61/2*xx4,
 kodetalodd[5,2,2,1] = -10331/17418240+81/2*xx4,
 kodetalodd[4,1,4,1] = -3463/5806080+81/2*xx4,
 kodetalodd[4,3,2,1] = +11857/174182400-9/2*xx4,
 kodetalodd[4,3,1,2] = +193153/116121600-213/2*xx4,
 kodetalodd[4,2,3,1] = -491101/232243200+279/2*xx4,
 kodetalodd[4,2,1,3] = -135/2*xx4+5671/5160960,
 kodetalodd[4,1,3,2] = -20941/7741440+180*xx4,
 kodetalodd[4,1,2,3] = 153/2*xx4-5561/4838400,
 kodetalodd[4,2,2,2] = -354173/348364800+71*xx4,
 kodetalodd[1,3,3,3] = 5311/5160960-135/2*xx4,
 kodetalodd[3,2,3,2] = -711461/348364800+271/2*xx4,
 kodetalodd[5,1,1,1,1,1,1] = -16397/928972800,
 kodetalodd[4,2,1,1,1,1] = 6751/55738368-9/2*xx4,
 kodetalodd[4,1,2,1,1,1] = 18*xx4-1321/2322432,
 kodetalodd[4,1,1,2,1,1] = 6487/29030400-9/2*xx4,
 kodetalodd[4,1,1,1,2,1] = -737/4838400,
 kodetalodd[4,1,1,1,1,2] = -139/2150400,
 kodetalodd[3,1,3,1,1,1] = -20693/77414400+27/2*xx4,
 kodetalodd[3,1,1,3,1,1] = -4343/19353600,
 kodetalodd[3,2,2,1,1,1] = -81407/116121600+27/2*xx4,
 kodetalodd[3,2,1,2,1,1] = 196487/174182400-27/2*xx4,
 kodetalodd[3,2,1,1,2,1] = -13621/87091200,
 kodetalodd[3,2,1,1,1,2] = 7163/19353600-9/2*xx4,
 kodetalodd[3,1,2,2,1,1] = -64159/116121600+27*xx4,
 kodetalodd[3,1,2,1,2,1] = -33073/29030400,
 kodetalodd[3,1,2,1,1,2] = -895/774144+18*xx4,
 kodetalodd[3,1,1,2,2,1] = 6619/29030400,
 kodetalodd[3,1,1,2,1,2] = 14137/19353600-9/2*xx4,
 kodetalodd[3,1,1,1,2,2] = -1457/3225600,
 kodetalodd[1,2,1,2,2,2] = 38257/348364800+9/2*xx4,
 kodetalodd[1,2,2,2,1,2] = 40717/87091200-9/2*xx4,

kodetalodd[3,1,1,1,1,1,1] = -11813/464486400,
kodetalodd[2,1,2,1,1,1,1] = -27751/232243200,
kodetalodd[2,1,1,1,2,1,1] = 73/907200,
kodetalodd[2,1,1,1,1,2,1] = -157/1382400,

kodutal_levv[10] = -73/3503554560,
kodutal_levv[8,1,1] = 11293/30656102400,
kodutal_levv[7,2,1] = +88273/245248819200+1/16*xx4+xx5,
kodutal_levv[7,1,2] = 551/648806400,
kodutal_levv[6,3,1] = -580387/490497638400+19/96*xx4+5/2*xx5,
kodutal_levv[6,1,3] = 4757/2919628800,
kodutal_levv[6,2,2] = 331147/147149291520+1/48*xx4-xx5,
kodutal_levv[5,4,1] = -179419/105106636800+1/8*xx4+xx5,
kodutal_levv[5,1,4] = 1831/875888640,
kodutal_levv[5,3,2] = +25933/26754416640+7/96*xx4-3/2*xx5,
kodutal_levv[5,2,3] = 601303/147149291520+1/48*xx4+xx5,
kodutal_levv[4,2,4] = +3603697/1471492915200-1/96*xx4-1/2*xx5,
kodutal_levv[3,4,3] = -625831/294298583040-1/96*xx4-1/2*xx5,
kodutal_levv[6,1,1,1,1] = -64481/61312204800,
kodutal_levv[5,2,1,1,1] = +11003161/11771943321600-157/768*xx4-45/16*xx5,
kodutal_levv[5,1,2,1,1] = -36016067/1961990553600+127/128*xx4+93/8*xx5,
kodutal_levv[5,1,1,2,1] = 2830481/1307993702400-63/256*xx4-45/16*xx5,
kodutal_levv[5,1,1,1,2] = -38089/40874803200,
kodutal_levv[4,3,1,1,1] = 11877223/840853094400-111/128*xx4-69/8*xx5,
kodutal_levv[4,1,3,1,1] = -18109313/435997900800+573/256*xx4+279/16*xx5,
kodutal_levv[4,1,1,3,1] = 2451527/784796221440-47/256*xx4+3/16*xx5,
kodutal_levv[4,1,1,1,3] = -5563/4379443200,
kodutal_levv[4,2,2,1,1] = -313512103/11771943321600+1043/768*xx4+211/16*xx5,
kodutal_levv[4,2,1,2,1] = 28785949/1681706188800-285/256*xx4-135/16*xx5,
kodutal_levv[4,2,1,1,2] = +136763/71345111040-33/256*xx4+45/16*xx5,
kodutal_levv[4,1,2,2,1] = -104466497/2942985830400+377/192*xx4+53/4*xx5,
kodutal_levv[4,1,2,1,2] = -296447/19818086400+65/128*xx4-93/8*xx5,
kodutal_levv[4,1,1,2,2] = 20183687/11771943321600-33/256*xx4+45/16*xx5,
kodutal_levv[2,3,3,1,1] = -1489561/72666316800+389/384*xx4-35/8*xx5,
kodutal_levv[2,3,1,3,1] = 148970117/1471492915200-169/32*xx4-21/2*xx5,
kodutal_levv[2,3,1,1,3] = 217123/49049763840-1/16*xx4-3*xx5,
kodutal_levv[2,1,3,3,1] = -72055033/1307993702400+791/256*xx4+213/16*xx5,
kodutal_levv[2,1,3,1,3] = -112918301/3923981107200+257/256*xx4-93/16*xx5,
kodutal_levv[2,1,1,3,3] = 9396313/784796221440-113/256*xx4+93/16*xx5,
kodutal_levv[3,2,2,2,1] = -8043911/367873228800+5/4*xx4+6*xx5,
kodutal_levv[3,2,2,1,2] = -90118921/5885971660800+181/384*xx4-35/8*xx5,
kodutal_levv[3,2,1,2,2] = 102051953/7063165992960-129/256*xx4+45/16*xx5,
kodutal_levv[3,1,2,2,2] = -1636219/67268247552+793/768*xx4-71/16*xx5,
kodutal_levv[4,1,1,1,1,1,1] = 5417/6131220480,
kodutal_levv[3,2,1,1,1,1,1] = -619589/490497638400+3/32*xx4+27/2*xx5,
kodutal_levv[3,1,2,1,1,1,1] = 24080009/3923981107200-93/256*xx4-855/16*xx5,
kodutal_levv[3,1,1,2,1,1,1] = -24912121/1961990553600+117/128*xx4+423/8*xx5,
kodutal_levv[3,1,1,1,2,1,1] = 4149671/261598740480-285/256*xx4-855/16*xx5,
kodutal_levv[3,1,1,1,1,2,1] = -529271/163499212800+9/32*xx4+27/2*xx5,
kodutal_levv[3,1,1,1,1,1,2] = 6019/13624934400,
kodutal_levv[2,1,2,2,1,1,1] = +658853/490497638400-3/32*xx4-27/2*xx5,
kodutal_levv[2,1,2,1,2,1,1] = 5253041/1961990553600-13/128*xx4+33/8*xx5,
kodutal_levv[2,1,2,1,1,2,1] = 871723/93428121600-83/128*xx4-249/8*xx5,
kodutal_levv[2,1,2,1,1,1,2] = -309719/47087732864+25/256*xx4+75/16*xx5,
kodutal_levv[2,1,1,1,2,1,2] = -1276223/1681706188800+47/256*xx4+141/16*xx5,
kodutal_levv[2,1,1,1,1,1,1,1] = -677/1946419200,

kodetal_revv[9,1] = -767/272498688,
kodetal_revv[8,2] = -21983/1672151040+5/24*xx4+10*xx5,
kodetal_revv[7,3] = -120545/4204265472+35/48*xx4+35*xx5,
kodetal_revv[6,4] = -562417/21021327360+35/48*xx4+35*xx5,
kodetal_revv[7,1,1,1] = 335/22708224,
kodetal_revv[6,2,1,1] = +18035923/392398110720-75/128*xx4-225/8*xx5,
kodetal_revv[6,1,2,1] = 5395037/196199055360+155/64*xx4+465/4*xx5,
kodetal_revv[6,1,1,2] = 5191009/130799370240-75/128*xx4-225/8*xx5,
kodetal_revv[5,3,1,1] = 321709/8719958016-305/128*xx4-915/8*xx5,
kodetal_revv[5,1,3,1] = 22864753/392398110720+775/128*xx4+2325/8*xx5,
kodetal_revv[5,1,1,3] = 708161/17836277760-35/64*xx4-105/4*xx5,
kodetal_revv[5,1,2,2] = 8181977/107017666560+1765/384*xx4+1765/8*xx5,
kodetal_revv[5,2,1,2] = +20906425/235438866432-1205/384*xx4-1125/8*xx5,
kodetal_revv[5,2,2,1] = 540845/7357464576+55/12*xx4+220*xx5,

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kodetal_revv[4,1,4,1] = +3607279/65399685120+235/64*xx4+705/4*xx5,
kodetal_revv[4,3,2,1] = 59993/9196830720,
kodetal_revv[4,3,1,2] = -3287411/392398110720-1005/128*xx4-2895/8*xx5,
kodetal_revv[4,2,3,1] = 437724713/2942985830400+705/64*xx4+2115/4*xx5,
kodetal_revv[4,2,1,3] = 4333627/217998950400-495/128*xx4-1485/8*xx5,
kodetal_revv[4,1,3,2] = 676369/4087480320+265/24*xx4+530*xx5,
kodetal_revv[4,1,2,3] = 24773141/294298583040+355/96*xx4+355/2*xx5,
kodetal_revv[4,2,2,2] = 23261/194641920+125/24*xx4+240*xx5,
kodetal_revv[1,3,3,3] = -4804145/78479622144-355/128*xx4-1065/8*xx5,
kodetal_revv[3,2,3,2] = 24190633/168170618880+2465/384*xx4+2505/8*xx5,
kodetal_revv[5,1,1,1,1,1] = -11399/408748032,
kodetal_revv[4,2,1,1,1,1] = -5251/201850880+45/16*xx4+135*xx5,
kodetal_revv[4,1,2,1,1,1] = -23344439/392398110720-1425/128*xx4-4275/8*xx5,
kodetal_revv[4,1,1,2,1,1] = -5868307/65399685120+705/64*xx4+2115/4*xx5,
kodetal_revv[4,1,1,1,2,1] = 19275337/392398110720-1425/128*xx4-4275/8*xx5,
kodetal_revv[4,1,1,1,1,2] = -725899/9809952768+45/16*xx4+135*xx5,
kodetal_revv[3,1,3,1,1,1] = -5361707/130799370240-375/128*xx4-1125/8*xx5,
kodetal_revv[3,1,1,1,3,1] = -4690093/130799370240-705/128*xx4-2115/8*xx5,
kodetal_revv[3,2,2,1,1,1] = -809003/8719958016-1785/128*xx4-5355/8*xx5,
kodetal_revv[3,2,1,2,1,1] = 11941627/130799370240+3335/128*xx4+10005/8*xx5,
kodetal_revv[3,2,1,1,2,1] = 1393393/65399685120-235/64*xx4-705/4*xx5,
kodetal_revv[3,2,1,1,1,2] = -40939/9809952768+75/8*xx4+405*xx5,
kodetal_revv[3,1,2,2,1,1] = -19008599/326998425600-375/64*xx4-1125/4*xx5,
kodetal_revv[3,1,2,1,2,1] = -112696979/653996851200-4275/128*xx4-12825/8*xx5,
kodetal_revv[3,1,2,1,1,2] = -23642611/392398110720-3205/128*xx4-8175/8*xx5,
kodetal_revv[3,1,1,2,2,1] = 1032841/26159874048+705/128*xx4+2115/8*xx5,
kodetal_revv[3,1,1,2,1,2] = 70163237/1961990553600+2095/128*xx4+5925/8*xx5,
kodetal_revv[3,1,1,1,2,2] = -13980121/326998425600-705/64*xx4-2115/4*xx5,
kodetal_revv[1,2,1,2,2,2] = 644597/21799895040+175/64*xx4+705/4*xx5,
kodetal_revv[1,2,2,2,1,2] = 554737/1783627760+905/64*xx4+2535/4*xx5,
kodetal_revv[3,1,1,1,1,1,1,1] = 7009/204374016,
kodetal_revv[2,1,2,1,1,1,1,1] = 103049/743178240,
kodetal_revv[2,1,1,1,2,1,1,1] = -612947/8174960640,
kodetal_revv[2,1,1,1,1,1,2,1] = 23425/181665792,

```

```

#####
#####
## First components of talodd (rather than detalodd) in expanded form:

```

```
talodd_1:= -1/2*Q(u1) : ##
```

```
talodd_2:= +1/8*Q(u1)*Q(u2) : ##
```

```
talodd_3:=
-1/48*Q(u1)*Q(u2)*Q(u3)
+1/24*Q(u2)*c^2-1/48*Q(u3)*c^2-1/48*Q(u1)*c^2
: ##
```

```
rtalodd_4:=
+1/384*Q(u2)*Q(u3)*Q(u1)*Q(u4)
+1/96*Q(u4)*Q(u1)*c^2-1/96*Q(u3)*Q(u1)*c^2-1/96*Q(u4)*Q(u2)*c^2+1/192*Q(u4)*Q(u3)*c^2+1/192*Q(u1)*Q(u2)*c^2
: ##
```

```
talodd_5:=
-1/3840*Q(u1)*Q(u2)*Q(u3)*Q(u4)*Q(u5)
+1/288*Q(u4)*Q(u5)*Q(u2)*c^2-11/5760*Q(u4)*Q(u5)*Q(u3)*c^2-1/2880*Q(u4)*Q(u5)*Q(u1)*c^2
+1/288*Q(u2)*Q(u1)*Q(u4)*c^2-11/5760*Q(u2)*Q(u1)*Q(u3)*c^2-1/2880*Q(u2)*Q(u1)*Q(u5)*c^2
-11/2880*Q(u1)*Q(u5)*Q(u3)*c^2+1/960*Q(u2)*Q(u5)*Q(u3)*c^2-1/1440*Q(u2)*Q(u3)*Q(u4)*c^2
+1/960*Q(u1)*Q(u3)*Q(u4)*c^2
+19/2880*Q(u4)*c^4-19/1920*Q(u3)*c^4-19/11520*Q(u1)*c^4+19/2880*Q(u2)*c^4-19/11520*Q(u5)*c^4
: ##
```

```
talodd_6:=
+1/46080*Q(u6)*Q(u5)*Q(u4)*Q(u3)*Q(u2)*Q(u1)
-1/3840*Q(u1)*Q(u4)*Q(u5)*Q(u2)*c^2-1/1536*Q(u6)*Q(u4)*Q(u5)*Q(u2)*c^2+17/46080*Q(u6)*Q(u4)*Q(u5)*Q(u3)*c^2
+1/7680*Q(u6)*Q(u4)*Q(u5)*Q(u1)*c^2+17/23040*Q(u6)*Q(u2)*Q(u1)*Q(u4)*c^2+1/7680*Q(u6)*Q(u2)*Q(u1)*Q(u3)*c^2
-11/23040*Q(u6)*Q(u2)*Q(u1)*Q(u5)*c^2+17/23040*Q(u6)*Q(u1)*Q(u5)*Q(u3)*c^2-1/3840*Q(u6)*Q(u2)*Q(u5)*Q(u3)*c^2
+1/5760*Q(u6)*Q(u2)*Q(u3)*Q(u4)*c^2-1/1920*Q(u6)*Q(u1)*Q(u3)*Q(u4)*c^2-1/1536*Q(u2)*Q(u1)*Q(u5)*Q(u3)*c^2
+17/46080*Q(u2)*Q(u1)*Q(u4)*Q(u3)*c^2+1/5760*Q(u1)*Q(u4)*Q(u5)*Q(u3)*c^2
+1/1152*Q(u5)*Q(u2)*c^4+31/11520*Q(u6)*Q(u3)*c^4-1/480*Q(u6)*Q(u2)*c^4-1/2304*Q(u5)*Q(u3)*c^4+19/46080*Q(u6)*Q(u5)*c^4
+1/960*Q(u6)*Q(u1)*c^4-19/11520*Q(u6)*Q(u4)*c^4+19/46080*Q(u2)*Q(u1)*c^4-19/11520*Q(u3)*Q(u1)*c^4
+31/11520*Q(u1)*Q(u4)*c^4+1/4608*Q(u3)*Q(u4)*c^4-1/2304*Q(u2)*Q(u4)*c^4-1/480*Q(u1)*Q(u5)*c^4
: ##
```


+45/2*xx4*Q(u8)*Q(u3)*Q(u7)*Q(u6)*c^4-9/2*xx4*Q(u7)*Q(u6)*Q(u5)*Q(u3)*c^4+13649/139345920*Q(u8)*Q(u5)*Q(u3)*Q(u1)*c^4
+643/22118400*Q(u6)*Q(u7)*Q(u8)*Q(u5)*c^4-81/2*xx4*Q(u4)*Q(u1)*Q(u7)*Q(u5)*c^4-18901/39813120*Q(u8)*Q(u1)*Q(u2)*Q(u5)*c^4
+121/4423680*Q(u8)*Q(u7)*Q(u3)*Q(u4)*c^4-8333/464486400*Q(u4)*Q(u7)*Q(u6)*Q(u3)*c^4+1103/2867200*Q(u4)*Q(u7)*Q(u6)*Q(u2)*c^4
+27*xx4*Q(u2)*Q(u5)*Q(u3)*Q(u7)*Q(u8)*Q(u2)*Q(u1)*c^4+81/2*xx4*Q(u8)*Q(u1)*Q(u2)*Q(u5)*c^4
-3361/19906560*Q(u1)*Q(u8)*Q(u2)*Q(u4)*c^4-34343/87091200*Q(u8)*Q(u2)*Q(u4)*Q(u3)*c^4-27*xx4*Q(u8)*Q(u3)*Q(u7)*Q(u5)*c^4
+9/2*xx4*Q(u8)*Q(u6)*Q(u5)*Q(u4)*c^4-9/2*xx4*Q(u4)*Q(u6)*Q(u5)*Q(u2)*c^4-1051/30965760*Q(u2)*Q(u1)*Q(u7)*Q(u6)*c^4
+74571/1393459200*Q(u2)*Q(u1)*Q(u7)*Q(u5)*c^4-41/1843200*Q(u2)*Q(u1)*Q(u5)*Q(u4)*c^4-9209/19353600*Q(u2)*Q(u1)*Q(u6)*Q(u4)*c^4
-120913/348364800*Q(u7)*Q(u6)*Q(u5)*Q(u2)*c^4+847/5529600*Q(u8)*Q(u2)*Q(u4)*Q(u6)*c^4+73097/232243200*Q(u8)*Q(u2)*Q(u7)*Q(u6)*c^4
-73097/232243200*Q(u1)*Q(u2)*Q(u7)*Q(u7)*c^4+13649/139345920*Q(u8)*Q(u1)*Q(u4)*Q(u6)*c^4-5317/464486400*Q(u8)*Q(u1)*Q(u7)*Q(u6)*c^4
+3361/19906560*Q(u8)*Q(u1)*Q(u7)*Q(u5)*c^4+117373/278691840*Q(u8)*Q(u3)*Q(u5)*Q(u4)*c^4-269089/464486400*Q(u8)*Q(u3)*Q(u4)*Q(u6)*c^4
-3811/12902400*Q(u8)*Q(u3)*Q(u7)*Q(u6)*c^4+9209/19353600*Q(u8)*Q(u3)*Q(u7)*Q(u5)*c^4+45/2*xx4*Q(u8)*Q(u2)*Q(u4)*Q(u3)*c^4
+24737/232243200*Q(u1)*Q(u3)*Q(u5)*Q(u4)*c^4+81/2*xx4*Q(u8)*Q(u2)*Q(u5)*Q(u4)*c^4-45/2*xx4*Q(u8)*Q(u2)*Q(u7)*Q(u6)*c^4
-3719/99532800*Q(u8)*Q(u3)*Q(u2)*c^4-17435/27869184*Q(u8)*Q(u2)*Q(u7)*Q(u5)*c^4-45/2*xx4*Q(u8)*Q(u3)*Q(u5)*Q(u4)*c^4
+27*xx4*Q(u8)*Q(u3)*Q(u6)*Q(u5)*c^4-45/2*xx4*Q(u1)*Q(u7)*Q(u6)*Q(u5)*c^4+81/2*xx4*Q(u1)*Q(u7)*Q(u3)*Q(u4)*c^4
-45/2*xx4*Q(u2)*Q(u3)*Q(u4)*Q(u7)*c^4+9/2*xx4*Q(u2)*Q(u3)*Q(u4)*Q(u6)*Q(u5)*c^4-9/2*xx4*Q(u1)*Q(u3)*Q(u5)*Q(u4)*c^4
+45/2*xx4*Q(u4)*Q(u5)*Q(u3)*Q(u7)*Q(u5)*c^4+81/2*xx4*Q(u4)*Q(u3)*Q(u7)*Q(u5)*c^4-81/2*xx4*Q(u2)*Q(u1)*Q(u7)*Q(u4)*c^4
-27*xx4*Q(u1)*Q(u5)*Q(u3)*Q(u6)*c^4+81/2*xx4*Q(u1)*Q(u7)*Q(u6)*Q(u4)*c^4+81/2*xx4*Q(u8)*Q(u2)*Q(u7)*Q(u5)*c^4
+1951/46448640*Q(u1)*Q(u3)*Q(u3)*Q(u4)*c^4-53927/87091200*Q(u1)*Q(u7)*Q(u3)*Q(u4)*c^4-24737/232243200*Q(u8)*Q(u6)*Q(u5)*Q(u4)*c^4
-9/2*xx4*Q(u1)*Q(u2)*Q(u3)*Q(u6)*c^4+27*xx4*Q(u1)*Q(u8)*Q(u6)*Q(u5)*Q(u3)*Q(u4)*c^4
+23683/278691840*Q(u4)*Q(u6)*Q(u5)*Q(u2)*c^4+171593/232243200*Q(u4)*Q(u1)*Q(u7)*Q(u5)*c^4
-117373/278691840*Q(u4)*Q(u6)*Q(u5)*Q(u1)*c^4-26939/1393459200*Q(u4)*Q(u3)*Q(u7)*Q(u5)*c^4
-171593/232243200*Q(u8)*Q(u2)*Q(u5)*Q(u4)*c^4+17435/27869184*Q(u2)*Q(u1)*Q(u7)*Q(u4)*c^4+8333/464486400*Q(u2)*Q(u5)*Q(u3)*Q(u6)*c^4
+121/22118400*Q(u2)*Q(u2)*Q(u6)*Q(u5)*c^4-121/5529600*Q(u1)*Q(u3)*Q(u7)*Q(u5)*c^4+120913/348364800*Q(u2)*Q(u3)*Q(u4)*Q(u7)*c^4
-71473/696729600*Q(u2)*Q(u3)*Q(u4)*Q(u6)*c^4+18901/398131200*Q(u7)*Q(u8)*Q(u1)*Q(u4)*c^4-166049/1393459200*Q(u7)*Q(u8)*Q(u2)*Q(u4)*c^4
+503/464486400*Q(u2)*Q(u4)*Q(u5)*Q(u3)*c^4-81/2*xx4*Q(u8)*Q(u6)*Q(u5)*c^4-45/2*xx4*Q(u1)*Q(u2)*Q(u3)*Q(u6)*c^4
+41/1843200*Q(u7)*Q(u8)*Q(u5)*Q(u3)*c^4+41/19353600*Q(u1)*Q(u2)*Q(u3)*Q(u5)*c^4-7553/99532800*Q(u1)*Q(u3)*Q(u4)*Q(u6)*c^4
+3719/99532800*Q(u1)*Q(u3)*Q(u7)*Q(u6)*c^4+34343/87091200*Q(u1)*Q(u7)*Q(u6)*Q(u5)*c^4-1951/464486400*Q(u1)*Q(u8)*Q(u6)*Q(u5)*c^4
+9/2*xx4*Q(u8)*Q(u1)*Q(u7)*Q(u6)*c^4+41393/154828800*Q(u7)*Q(u8)*Q(u3)*Q(u1)*c^4+5317/464486400*Q(u1)*Q(u2)*Q(u3)*Q(u8)*c^4
-643/22118400*Q(u2)*Q(u2)*Q(u3)*Q(u4)*c^4+121/7372800*Q(u4)*Q(u2)*Q(u3)*Q(u6)*c^4-1103/2867200*Q(u2)*Q(u5)*Q(u3)*Q(u7)*c^4
-6379/87091200*Q(u1)*Q(u7)*Q(u6)*Q(u4)*c^4+6379/87091200*Q(u8)*Q(u5)*Q(u3)*Q(u2)*c^4-41/19353600*Q(u6)*Q(u7)*Q(u8)*Q(u4)*c^4
+3811/12902400*Q(u1)*Q(u2)*Q(u3)*Q(u6)*c^4+121/7372800*Q(u4)*Q(u2)*Q(u3)*Q(u6)*c^4-1103/2867200*Q(u2)*Q(u5)*Q(u3)*Q(u7)*c^4
+7553/99532800*Q(u8)*Q(u5)*Q(u3)*c^4+24383/464486400*Q(u4)*Q(u2)*c^4-245971/464486400*Q(u8)*Q(u5)*c^4+401/22118400*Q(u4)*Q(u3)*c^6
+141667/232243200*Q(u1)*Q(u3)*Q(u6)*c^4-24383/464486400*Q(u7)*Q(u5)*c^4+7541/232243200*Q(u4)*Q(u7)*c^4+20653/928972800*Q(u8)*Q(u6)*c^6
-7541/232243200*Q(u7)*Q(u3)*c^6-1649/928972800*Q(u2)*Q(u3)*c^6-59/14745600*Q(u8)*Q(u7)*c^6-161467/232243200*Q(u1)*Q(u5)*c^6
+23843/464486400*Q(u1)*Q(u6)*c^6-23843/116121600*Q(u1)*Q(u7)*c^6+23843/116121600*Q(u8)*Q(u2)*c^6+23843/464486400*Q(u8)*Q(u3)*c^6
+401/5529600*Q(u6)*Q(u4)*c^6-1649/928972800*Q(u7)*Q(u6)*c^6-7541/232243200*Q(u5)*Q(u2)*c^6-401/5529600*Q(u5)*Q(u3)*c^6
+7541/232243200*Q(u6)*Q(u2)*c^6-401/22118400*Q(u6)*Q(u5)*c^6+59/14745600*Q(u2)*Q(u2)*c^6-20653/928972800*Q(u1)*Q(u3)*c^6
+245971/464486400*Q(u1)*Q(u4)*c^6
:###

First components of dutal_levv in expanded form:

dutal_levv_2:= -1/24*Q(u2)*c+1/24*Q(u1)*c : ##

dutal_levv_4:=
+7/5760*Q(u4)*Q(u3)*Q(u2)*c-7/1920*Q(u4)*Q(u3)*Q(u1)*c
+7/1920*Q(u4)*Q(u1)*Q(u2)*c-7/5760*Q(u1)*Q(u3)*Q(u2)*c
-3/640*Q(u2)*c^3-1/640*Q(u1)*c^3+3/640*Q(u3)*c^3-1/640*Q(u4)*c^3
: ##

dutal_levv_6:=
+31/193536*Q(u6)*Q(u5)*Q(u4)*Q(u3)*Q(u1)*c-31/96768*Q(u6)*Q(u5)*Q(u4)*Q(u2)*c
+31/96768*Q(u6)*Q(u5)*Q(u1)*Q(u3)*Q(u2)*c-31/96768*Q(u6)*Q(u5)*Q(u4)*Q(u3)*Q(u2)*c
-31/193536*Q(u1)*Q(u3)*Q(u4)*c^3+17/4172*Q(u2)*Q(u1)*Q(u4)*c^3+589/2903040*Q(u2)*Q(u3)*Q(u4)*c^3
-589/1451520*Q(u2)*Q(u5)*Q(u3)*c^3+589/1451520*Q(u4)*Q(u5)*Q(u2)*c^3-73/483840*Q(u2)*Q(u1)*Q(u3)*c^3
-589/2903040*Q(u4)*Q(u3)*Q(u4)*c^3+31/181440*Q(u4)*Q(u2)*Q(u6)*c^3-31/725760*Q(u3)*Q(u2)*Q(u6)*c^3
+353/2903040*Q(u2)*Q(u6)*Q(u5)*c^3-53/161280*Q(u3)*Q(u1)*Q(u6)*c^3+53/322560*Q(u1)*Q(u2)*Q(u6)*c^3
-53/322560*Q(u1)*Q(u6)*Q(u5)*c^3+53/161280*Q(u1)*Q(u6)*Q(u4)*c^3-17/4172*Q(u6)*Q(u5)*Q(u3)*c^3
+73/483840*Q(u6)*Q(u5)*Q(u4)*c^3+31/181440*Q(u6)*Q(u3)*c^3-31/181440*Q(u1)*Q(u5)*Q(u3)*c^3
-353/2903040*Q(u2)*Q(u1)*Q(u5)*c^3+31/725760*Q(u4)*Q(u5)*Q(u1)*c^3
+79/193536*Q(u5)*c^5-79/96768*Q(u4)*Q(u5)*c^5-79/96768*Q(u3)*c^5
-79/96768*Q(u5)*c^5-79/193536*Q(u2)*c^5-79/96768*Q(u6)*c^5
: ##

reg_dutal_levv_8:=
-127/22118400*Q(u8)*Q(u7)*Q(u6)*Q(u5)*Q(u4)*Q(u3)*Q(u1)*c
+127/7372800*Q(u8)*Q(u7)*Q(u6)*Q(u5)*Q(u4)*Q(u1)*Q(u2)*c
-127/4423680*Q(u8)*Q(u7)*Q(u6)*Q(u5)*Q(u1)*Q(u3)*Q(u2)*c
+127/4423680*Q(u8)*Q(u7)*Q(u6)*Q(u1)*Q(u4)*Q(u3)*Q(u2)*c
-127/154828800*Q(u1)*Q(u7)*Q(u6)*Q(u5)*Q(u4)*Q(u3)*Q(u2)*c
-127/7372800*Q(u8)*Q(u7)*Q(u1)*Q(u5)*Q(u4)*Q(u3)*Q(u2)*c
+127/22118400*Q(u8)*Q(u1)*Q(u6)*Q(u5)*Q(u4)*Q(u3)*Q(u2)*c
+127/154828800*Q(u8)*Q(u7)*Q(u6)*Q(u5)*Q(u4)*Q(u3)*Q(u2)*c
-10*xx4*Q(u3)*Q(u1)*Q(u8)*Q(u6)*Q(u5)*c^3-5/2*xx4*Q(u1)*Q(u3)*Q(u4)*Q(u8)*Q(u7)*c^3
+xx4*Q(u2)*Q(u1)*Q(u4)*Q(u8)*Q(u7)*c^3-xx4*Q(u1)*Q(u2)*Q(u8)*Q(u7)*Q(u5)*c^3
+5/2*xx4*Q(u1)*Q(u2)*Q(u8)*Q(u6)*Q(u5)*c^3+10*xx4*Q(u1)*Q(u3)*Q(u4)*Q(u8)*Q(u6)*c^3
-xx4*Q(u2)*Q(u1)*Q(u3)*Q(u8)*Q(u6)*c^3-5/2*xx4*Q(u1)*Q(u4)*Q(u5)*Q(u2)*Q(u8)*c^3
+xx4*Q(u2)*Q(u1)*Q(u5)*Q(u3)*Q(u8)*c^3+xx4*Q(u3)*Q(u1)*Q(u8)*Q(u7)*Q(u6)*c^3
-223/6193152*Q(u1)*Q(u2)*Q(u3)*Q(u7)*Q(u6)*c^3+12407/1393459200*Q(u7)*Q(u2)*Q(u1)*Q(u6)*Q(u5)*c^3
-xx4*Q(u1)*Q(u8)*Q(u7)*Q(u6)*Q(u4)*c^3+5/2*xx4*Q(u1)*Q(u8)*Q(u7)*Q(u5)*Q(u4)*c^3
-12407/1393459200*Q(u4)*Q(u3)*Q(u2)*Q(u8)*Q(u7)*c^3+2729/199065600*Q(u7)*Q(u2)*Q(u1)*Q(u4)*Q(u3)*c^3
+1471/199065600*Q(u2)*Q(u6)*Q(u5)*Q(u3)*Q(u4)*c^3-13277/1393459200*Q(u1)*Q(u8)*Q(u6)*Q(u5)*Q(u4)*c^3
-xx4*Q(u8)*Q(u7)*Q(u6)*Q(u5)*Q(u3)*c^3+5/2*xx4*Q(u8)*Q(u7)*Q(u6)*Q(u4)*Q(u3)*c^3
-5/2*xx4*Q(u8)*Q(u6)*Q(u5)*Q(u4)*Q(u3)*c^3+6301/464486400*Q(u3)*Q(u1)*Q(u8)*Q(u7)*Q(u5)*c^3
-17/819200*Q(u1)*Q(u2)*Q(u8)*Q(u7)*Q(u6)*c^3+74563/1393459200*Q(u1)*Q(u2)*Q(u8)*Q(u7)*Q(u5)*c^3
-10*xx4*Q(u7)*Q(u1)*Q(u4)*Q(u5)*Q(u3)*c^3+10*xx4*Q(u2)*Q(u1)*Q(u4)*Q(u7)*Q(u5)*c^3
+10*xx4*Q(u5)*Q(u6)*Q(u7)*Q(u3)*Q(u1)*c^3+10*xx4*Q(u6)*Q(u5)*Q(u4)*Q(u2)*Q(u8)*c^3
+5/2*xx4*Q(u5)*Q(u4)*Q(u3)*Q(u2)*Q(u8)*c^3+xx4*Q(u2)*Q(u8)*Q(u7)*Q(u6)*Q(u5)*c^3
-10*xx4*Q(u2)*Q(u8)*Q(u7)*Q(u5)*Q(u4)*c^3+13277/1393459200*Q(u1)*Q(u4)*Q(u5)*Q(u3)*Q(u8)*c^3
+45817/1393459200*Q(u1)*Q(u4)*Q(u5)*Q(u2)*Q(u8)*c^3+10*xx4*Q(u5)*Q(u3)*Q(u2)*Q(u8)*Q(u7)*c^3
-6451/464486400*Q(u2)*Q(u1)*Q(u4)*Q(u3)*Q(u8)*c^3-10*xx4*Q(u7)*Q(u6)*Q(u2)*Q(u5)*Q(u3)*c^3
+11593/278691840*Q(u8)*Q(u7)*Q(u6)*Q(u5)*Q(u3)*c^3-17657/278691840*Q(u8)*Q(u7)*Q(u6)*Q(u4)*Q(u3)*c^3
+35267/1393459200*Q(u8)*Q(u7)*Q(u5)*Q(u4)*Q(u3)*c^3-40279/1393459200*Q(u8)*Q(u6)*Q(u5)*Q(u4)*Q(u3)*c^3
+563/17203200*Q(u7)*Q(u6)*Q(u5)*Q(u4)*c^3-40279/1393459200*Q(u1)*Q(u6)*Q(u5)*Q(u3)*Q(u4)*c^3
-35267/1393459200*Q(u2)*Q(u1)*Q(u6)*Q(u5)*Q(u4)*c^3+5/2*xx4*Q(u1)*Q(u6)*Q(u5)*Q(u3)*Q(u4)*c^3
-841/199065600*Q(u2)*Q(u1)*Q(u3)*Q(u8)*Q(u6)*c^3+841/199065600*Q(u3)*Q(u1)*Q(u8)*Q(u7)*Q(u6)*c^3
+5093/278691840*Q(u2)*Q(u1)*Q(u5)*Q(u3)*Q(u3)*c^3-33917/278691840*Q(u5)*Q(u3)*Q(u2)*Q(u8)*Q(u7)*c^3
+223/6193152*Q(u3)*Q(u2)*Q(u8)*Q(u7)*Q(u6)*c^3-10*xx4*Q(u7)*Q(u2)*Q(u1)*Q(u4)*Q(u3)*c^3
+5/2*xx4*Q(u1)*Q(u2)*Q(u3)*Q(u7)*Q(u6)*c^3+1193/557386800*Q(u1)*Q(u2)*Q(u3)*Q(u6)*Q(u5)*c^3
-1471/199065600*Q(u5)*Q(u6)*Q(u7)*Q(u4)*Q(u3)*c^3-34397/1393459200*Q(u5)*Q(u6)*Q(u7)*Q(u4)*Q(u2)*c^3
+54991/278691840*Q(u7)*Q(u6)*Q(u5)*Q(u3)*c^3-54991/278691840*Q(u7)*Q(u6)*Q(u2)*Q(u3)*Q(u4)*c^3
+34397/1393459200*Q(u2)*Q(u3)*Q(u4)*Q(u7)*Q(u5)*c^3-5/2*xx4*Q(u2)*Q(u1)*Q(u6)*Q(u5)*Q(u3)*c^3
-27707/199065600*Q(u5)*Q(u6)*Q(u7)*Q(u3)*Q(u1)*c^3-1/2064384*Q(u7)*Q(u6)*Q(u1)*Q(u3)*Q(u4)*c^3
+xx4*Q(u5)*Q(u6)*Q(u7)*Q(u4)*Q(u3)*c^3-5/2*xx4*Q(u3)*Q(u2)*Q(u8)*Q(u7)*Q(u6)*c^3
+17657/278691840*Q(u5)*Q(u3)*Q(u3)*c^3-11593/278691840*Q(u1)*Q(u2)*Q(u3)*Q(u4)*Q(u6)*c^3
+3881/464486400*Q(u1)*Q(u2)*Q(u3)*Q(u5)*Q(u4)*c^3+27707/199065600*Q(u6)*Q(u4)*Q(u3)*Q(u2)*Q(u8)*c^3
-563/17203200*Q(u5)*Q(u4)*Q(u3)*Q(u2)*Q(u8)*c^3-2729/199065600*Q(u2)*Q(u8)*Q(u7)*Q(u6)*Q(u5)*c^3
-74563/1393459200*Q(u2)*Q(u1)*Q(u4)*Q(u8)*Q(u7)*c^3-6301/464486400*Q(u2)*Q(u1)*Q(u4)*Q(u8)*Q(u6)*c^3
+17/819200*Q(u2)*Q(u1)*Q(u3)*Q(u8)*Q(u7)*c^3+xx4*Q(u1)*Q(u2)*Q(u3)*Q(u4)*Q(u6)*c^3
-3881/464486400*Q(u8)*Q(u7)*Q(u6)*Q(u5)*Q(u4)*c^3-204871/1393459200*Q(u2)*Q(u1)*Q(u4)*Q(u7)*Q(u5)*c^3
+56281/1393459200*Q(u1)*Q(u3)*Q(u4)*Q(u8)*Q(u7)*c^3-34861/199065600*Q(u1)*Q(u3)*Q(u4)*Q(u6)*Q(u5)*c^3
+10*xx4*Q(u7)*Q(u6)*Q(u2)*Q(u3)*Q(u4)*c^3-1193/557386800*Q(u2)*Q(u8)*Q(u7)*Q(u6)*Q(u4)*c^3
+204871/1393459200*Q(u2)*Q(u8)*Q(u7)*Q(u5)*Q(u4)*c^3-xx4*Q(u2)*Q(u6)*Q(u5)*Q(u3)*Q(u4)*c^3
-45817/1393459200*Q(u1)*Q(u8)*Q(u7)*Q(u5)*Q(u4)*c^3+72791/464486400*Q(u7)*Q(u1)*Q(u4)*Q(u5)*Q(u3)*c^3

+1/2064384*Q(u6)*Q(u5)*Q(u3)*Q(u2)*Q(u8)*c^3+34861/199065600*Q(u3)*Q(u1)*Q(u8)*Q(u6)*Q(u5)*c^3
-56281/1393459200*Q(u1)*Q(u2)*Q(u8)*Q(u6)*Q(u5)*c^3-5093/278691840*Q(u1)*Q(u8)*Q(u7)*Q(u6)*Q(u4)*c^3
-72791/464486400*Q(u6)*Q(u5)*Q(u4)*Q(u2)*Q(u8)*c^3+6451/464486400*Q(u1)*Q(u8)*Q(u7)*Q(u6)*Q(u5)*c^3
+33917/278691840*Q(u7)*Q(u2)*Q(u1)*Q(u4)*Q(u6)*c^3-10*xx4*Q(u6)*Q(u4)*Q(u3)*Q(u2)*Q(u8)*c^3
+81/2*xx4*Q(u6)*Q(u3)*Q(u1)*c^5+9/2*xx4*Q(u2)*Q(u4)*Q(u3)*c^5-3683/464486400*Q(u1)*Q(u8)*Q(u7)*c^5
+2851/154828800*Q(u2)*Q(u8)*Q(u6)*c^5-45/2*xx4*Q(u1)*Q(u2)*Q(u6)*c^5+4213/51609600*Q(u2)*Q(u8)*Q(u7)*c^5
-37627/92897280*Q(u3)*Q(u8)*Q(u7)*c^5+930367/1393459200*Q(u3)*Q(u8)*Q(u6)*c^5+9/2*xx4*Q(u8)*Q(u7)*Q(u5)*c^5
+27*xx4*Q(u2)*Q(u3)*Q(u4)*Q(u6)*c^5-4091/92897280*Q(u1)*Q(u8)*Q(u6)*c^5+307879/464486400*Q(u7)*Q(u4)*Q(u1)*c^5
+81/2*xx4*Q(u3)*Q(u4)*Q(u6)*c^5-4091/92897280*Q(u1)*Q(u8)*Q(u6)*c^5-9/2*xx4*Q(u2)*Q(u1)*Q(u4)*c^5
+9/2*xx4*Q(u2)*Q(u1)*Q(u7)*c^5-45/2*xx4*Q(u3)*Q(u5)*Q(u4)*c^5+7459/464486400*Q(u4)*Q(u3)*Q(u8)*c^5-27*xx4*Q(u4)*Q(u2)*Q(u8)*c^5
-2851/154828800*Q(u7)*Q(u3)*Q(u1)*c^5+3683/464486400*Q(u2)*Q(u1)*Q(u8)*c^5+27*xx4*Q(u1)*Q(u7)*Q(u5)*c^5
-81/2*xx4*Q(u7)*Q(u4)*Q(u1)*c^5-90437/1393459200*Q(u2)*Q(u7)*Q(u5)*c^5-953/464486400*Q(u3)*Q(u2)*Q(u8)*c^5
-1753/55738368*Q(u5)*Q(u3)*Q(u8)*c^5+27821/92897280*Q(u1)*Q(u5)*Q(u8)*c^5-27821/92897280*Q(u1)*Q(u4)*Q(u8)*c^5
+22733/199065600*Q(u2)*Q(u1)*Q(u4)*c^5-79/22118400*Q(u1)*Q(u4)*Q(u3)*c^5-68849/1393459200*Q(u2)*Q(u4)*Q(u3)*c^5
+45/2*xx4*Q(u3)*Q(u8)*Q(u7)*c^5+204943/464486400*Q(u4)*Q(u2)*Q(u8)*c^5-154703/464486400*Q(u6)*Q(u5)*Q(u4)*c^5
-3343/55738368*Q(u5)*Q(u3)*Q(u2)*c^5-27107/66355200*Q(u2)*Q(u5)*Q(u4)*c^5+81/2*xx4*Q(u2)*Q(u5)*Q(u8)*c^5
+4091/92897280*Q(u3)*Q(u1)*Q(u8)*c^5+68849/1393459200*Q(u7)*Q(u6)*Q(u5)*c^5-165551/278691840*Q(u3)*Q(u4)*Q(u6)*c^5
+165551/278691840*Q(u5)*Q(u3)*Q(u6)*c^5+79/22118400*Q(u8)*Q(u6)*Q(u5)*c^5-22733/199065600*Q(u8)*Q(u7)*Q(u5)*c^5
+5687/464486400*Q(u8)*Q(u7)*Q(u6)*c^5-9/2*xx4*Q(u2)*Q(u8)*Q(u7)*c^5+154703/464486400*Q(u3)*Q(u5)*Q(u4)*c^5
-9/2*xx4*Q(u7)*Q(u6)*Q(u5)*c^5-9/2*xx4*Q(u3)*Q(u1)*Q(u8)*c^5+9/2*xx4*Q(u1)*Q(u8)*Q(u6)*c^5-45/2*xx4*Q(u1)*Q(u5)*Q(u8)*c^5
-307879/464486400*Q(u2)*Q(u5)*Q(u8)*c^5+45/2*xx4*Q(u1)*Q(u2)*Q(u5)*c^5-81/2*xx4*Q(u6)*Q(u3)*Q(u2)*c^5-27*xx4*Q(u5)*Q(u3)*Q(u1)*c^5
+81/2*xx4*Q(u3)*Q(u7)*Q(u6)*c^5-45/2*xx4*Q(u4)*Q(u8)*Q(u7)*c^5+27*xx4*Q(u6)*Q(u4)*Q(u8)*c^5-5687/464486400*Q(u2)*Q(u1)*Q(u3)*c^5
-930367/1393459200*Q(u6)*Q(u3)*Q(u1)*c^5+37627/92897280*Q(u1)*Q(u2)*Q(u6)*c^5-7459/464486400*Q(u6)*Q(u5)*Q(u1)*c^5
+1753/55738368*Q(u1)*Q(u4)*Q(u6)*c^5-90437/1393459200*Q(u7)*Q(u4)*Q(u2)*c^5-216049/464486400*Q(u7)*Q(u3)*Q(u2)*c^5
+216049/464486400*Q(u2)*Q(u7)*Q(u6)*c^5-2729/199065600*Q(u7)*Q(u3)*Q(u4)*c^5+467/464486400*Q(u1)*Q(u5)*Q(u4)*c^5
+187/18579456*Q(u2)*Q(u4)*Q(u6)*c^5-187/18579456*Q(u3)*Q(u7)*Q(u5)*c^5-189221/278691840*Q(u3)*Q(u7)*Q(u6)*c^5
+195451/464486400*Q(u5)*Q(u3)*Q(u1)*c^5-569651/1393459200*Q(u1)*Q(u2)*Q(u5)*c^5+2729/199065600*Q(u6)*Q(u5)*Q(u2)*c^5
+189221/278691840*Q(u6)*Q(u3)*Q(u2)*c^5-27*xx4*Q(u4)*Q(u7)*Q(u5)*c^5-81/2*xx4*Q(u3)*Q(u8)*Q(u6)*c^5
+27107/66355200*Q(u4)*Q(u7)*Q(u5)*c^5+3343/55738368*Q(u7)*Q(u6)*Q(u4)*c^5+45/2*xx4*Q(u1)*Q(u4)*Q(u8)*c^5
+569651/1393459200*Q(u4)*Q(u8)*Q(u7)*c^5-195451/464486400*Q(u6)*Q(u4)*Q(u8)*c^5-467/464486400*Q(u5)*Q(u4)*Q(u8)*c^5
-4213/51609600*Q(u2)*Q(u1)*Q(u7)*c^5+45/2*xx4*Q(u6)*Q(u5)*Q(u4)*c^5+27*xx4*Q(u2)*Q(u5)*Q(u4)*c^5
+953/464486400*Q(u1)*Q(u7)*Q(u6)*c^5-204943/464486400*Q(u1)*Q(u7)*Q(u5)*c^5-81/2*xx4*Q(u5)*Q(u3)*Q(u6)*c^5
-2339/22118400*Q(u6)*c^7-2339/66355200*Q(u2)*c^7+2339/66355200*Q(u7)*c^7+2339/13271040*Q(u5)*c^7
-2339/464486400*Q(u8)*c^7+2339/464486400*Q(u1)*c^7+2339/22118400*Q(u3)*c^7-2339/13271040*Q(u4)*c^7
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