RC-Run.mw

```
> read `/home/ph/maple/RC.txt`:read "/home/ph/maple/cartan.txt";unprotect(gamma);

> with(PolynomialTools):

> read `/home/ph/maple/Solv.txt`;

                    "UT(R,B) will simultaneously upper-triangularize two Matrices R and B"

> unassign('x');

> R:=transmat([12,12,10,10,3,8,6,6,4,4,2,1,12,15,14]):B:=transmat([11,11,5,9,9,7,5,2,7,1,8,3]):   #*************** 15 ************

> R:=transmat([12,12,10,10,3,8,6,6,4,4,2,1]):B:=transmat([11,11,5,9,9,7,5,2,7,1,8,3]):   #*************** 16 ************

>   R:=transmat([12,12,12,10,10,10,6,5,7,5,6,2]):B:=transmat([10,11,9,9,8,8,5,3,4,1,5,3]):   #*************** 12 ************RG

   ==========2S dbly stoch===========SW sandwich=================================

> R:=transmat([2,4,4,6,6,2]):B:=transmat([3,1,5,3,1,5]):    #rank 6;  32-41-45-63-61-25 RG CC SW

> R:=transmat([3,3,5,5,1,1]):B:=transmat([2,4,6,6,4,2]):    #rank 6;-- gamma 331/2048 RG CC SW

> unassign('a','b','c'):  R:=transmat([c,c,a,a,3,8,6,6,4,4,8,a]):B:=transmat([b,b,5,9,9,7,5,2,7,1,2,1]):   #*************** 12
  ************RG CC sync

>   R:=transmat([12,12,10,10,3,8,6,6,4,4,8,3]):B:=transmat([11,11,5,9,9,7,5,2,7,1,2,1]):   #*************** 12 ************RG

>   R:=transmat([8,8,b,7,7,5,5,4,4,3,1,2]):B:=transmat([c,b,a,9,8,7,6,5,3,4,2,1]):   #*************** 12 ************
  RG-CHECKED

>  unassign('a','b','c'): R:=transmat([c,c,1,2,4,1,5,5,1,2,1,1]):B:=transmat([7,b,8,3,9,a,6,6,a,9,9,a]):   #rank 9; CHECKED ***
  BIG 12 ** CC sync

>   R:=transmat([4,4,4,7,7,7,1,1,1]):B:=transmat([2,9,5,8,3,8,5,6,2]):   #rank 9; 42-49-45-78-73-78-15-16-12 *** NINER ***  Big
  NCC SW

>  R:=transmat([2,7,8,2,4,8,6,6]):B:=transmat([3,1,1,3,3,1,5,5]): #rank 5; 23-71-81-23-43-81-65-65 RG

>  R:=transmat([2,1,1,2,4,1,5,5]):B:=transmat([3,7,8,3,3,8,6,6]): #rank 5; 23-17-18-23-43-18-56-56 *******8********* RG CC
  ONLY RIGHT GROUPS***

> R:=transmat([2,3,2,2,1,3]):B:=transmat([5,4,6,5,4,5]):  #rank 5  25-34-26-52-41-53 RG CC

> R:=transmat([2,3,1,1,2,4]):B:=transmat([3,1,4,5,6,3]): #rank 5;  23-31-14-51-62-43 RG checked INVERTIBLE WITH A
  RIGHT GROUP****** NOT CC

> R:=transmat([3,5,5,1,7,8,8,7]):B:=transmat([4,6,2,5,6,1,5,6]):    #rank 6;  ## CHECKED RG-CHECKED NOT CC

> R:=transmat([2,1,1,2,3,1,5,5]):B:=transmat([6,7,8,6,4,8,4,7]):    #rank 6;    26-17-18-62-43-81-54-57   RG-CHECKED CC

> R:=transmat([2,1,1,2,4,1,5,5]):B:=transmat([3,7,8,3,3,8,6,6]): #rank 5;RG-CHECKED

> R:=transmat([3,3,5,6,7,7,1,2]):B:=transmat([2,4,4,5,6,8,8,1]): #  32-34-54-56-76-78-18-12 CHECKED RG

> R:=transmat([2,4,4,2,1,4]):B:=transmat([3,6,5,3,6,5]):#rank 4 / CC 23-46-45-23-61-54 ********** recolored
   244265-365314 ********** RG

> R:=transmat([6,1,5,6,1,5]):B:=transmat([2,5,1,2,3,4]): #rank 5 / CC  62-15-51-62-13-54 --- RG-CHECKED
```

> R:=transmat([2,3,1,3]):B:=transmat([4,4,2,2]): #rank 3, A invertible 24-34-12-32 --- RG-CHECKED ********** 2313-4422 **********

> R:=transmat([2,3,2,3]):B:=transmat([4,4,1,1]):#rank 3 &CC --- same as 3311-2442 Mini-SW

> R:=transmat([4,4,4,2]):B:=transmat([3,3,1,3]):#rank 3 / CC 43-34-14-23 --- checked for Delta **********4*********CC*

> R:=transmat([2,6,4,2,6,4]):B:=transmat([5,5,1,1,3,3]): # 25-65-41-21-63-43 --- RG-CHECKED

> R:=transmat([4,4,1,1,7,7,3,4]):B:=transmat([5,6,2,2,8,8,2,6]): #rank 5 & CC CHECKED

> R:=transmat([5,4,2,2,3]):B:=transmat([3,3,1,5,4]): #rank 4 / RG-CHECKED

> R:=transmat([5,3,1,5,3,1]):B:=transmat([6,4,2,6,4,2]): #rank 3 / CC 56-34-12-56-34-12 RG-CHECKED 2S

> R:=transmat([5,4,4,2,6,5]):B:=transmat([3,6,5,3,1,4]): RG-CHECKED

> R:=transmat([5,5,1,6,3,3]):B:=transmat([4,4,6,1,2,2]):# rank 3 54-54-16-61-32-32 2S

> R:=transmat([2,3,2,2,3]):B:=transmat([1,4,1,5,4]): # RG-CHECKED

> R:=transmat([4,5,1,6,3,2]):B:=transmat([5,4,6,1,2,3]):# rank 3 RG-CHECKED

> R:=transmat([3,3,5,5,1,2]):B:=transmat([4,4,6,6,2,3]):# rank 3 RG-CHECKED

> R:=transmat([3,3,5,5,1,1]):B:=transmat([2,4,4,6,6,2]):# 32-34-54-56-16-12 RG-CHECKED 2S

> R:=transmat([3,4,6,5,1,2]):B:=transmat([4,3,5,6,2,3]):# 34-43-65-56-12-23 RG-CHECKED

> R:=transmat([4,6,6,3,3,1,2]):B:=transmat([5,7,7,5,4,2,1]): # a SEVEN NO RG's other than groups RG-CHECKED

> R:=transmat([3,4,5,5,1]):B:=transmat([2,3,1,1,4]): #rank 4 / CC 32-43-51-51-14 RG-CHECKED

> R:=transmat([3,4,1,5,4]):B:=transmat([2,3,5,1,1]): #rank 4 / CC RG-CHECKED

> R:=transmat([6,1,1,6,1,4]):B:=transmat([2,5,5,2,3,5]):# RG-CHECKED

> R:=transmat([2,1,5,5,1]):B:=transmat([4,3,4,3,2]):# A invertible RG-CHECKED 2S

> R:=transmat([3,3,5,5,1,1]):B:=transmat([2,4,6,6,4,2]): #rank 6; RG-CHECKED 2S

> R:=transmat([6,1,5,2,3,4]):B:=transmat([2,5,1,6,1,5]): #rank 6; RG-CHECKED

> R:=transmat([2,4,2,3]):B:=transmat([4,3,1,1]): # XXX

> R:=transmat([2,1,2,1]):B:=transmat([4,3,4,3]): # XXX

> R:=transmat([4,4,6,6,2,2]):B:=transmat([5,5,1,1,3,3]): # RG-CHECKED 17/32 not sync'd 2S

> R:=transmat([2,3,4,5,6,7,8,9,1]):B:=transmat([5,6,7,2,3,4,5,6,7]): #RG-CHECKED Recolors to rank 6 RG PERIODIC

> R:=transmat([3,3,1,1,7,7,5,5]):B:=transmat([6,8,8,6,2,4,4,2]): #BIG 8

> R:=transmat([2,3,1]):B:=transmat([3,1,2]):# RG-CHECKED

> R:=transmat([1,1,2,2,2]):B:=transmat([3,4,4,5,4]): # CC with a rank 4 RG and rank 2 RG

> R:=transmat([9,3,5,1,7,2,6,7,9]):B:=transmat([6,4,9,2,5,8,1,9,4]): #INVERTIBLE RG-CHECKED all sync

```
> unassign('a','b','c'):R:=transmat([9,4,4,7,7,7,1,1,1,a]):B:=transmat([3,9,a,8,3,1,5,6,2,1]): #RG-CHECKED

> unassign('a','b','c'):R:=transmat([3,3,3,7,7,7,b,b,b,2,4,9]):B:=transmat([6,6,6,a,a,a,c,c,c,1,5,8]): #

> R:=transmat([6,2,5,3,3,1,7]):B:=transmat([2,4,7,5,2,5,1]):  #

> R:=transmat([2,3,1,3]):B:=transmat([4,4,4,2]): # INVERTIBLE

> R:=transmat([1,4,2,2,2]):B:=transmat([2,1,4,5,3]): # INVERTIBLE with RANK 3 RG

> R:=transmat([5,7,2,2,5,3,3]):B:=transmat([7,3,4,6,2,1,5]): #

> unassign('a','b','c','d'):R:=transmat([1,1,1,1,2,2,2,2,3,3,3,3]):B:=transmat([c,b,a,6,c,7,4,5,c,8,9,7]): #TESTER

> ############ START HERE ######################

> Delta:=evalm((R-B)/2):A:=evalm((R+B)/2):
  `R`=matrans(R);`B`=matrans(B);pi:=nullspace(J-transpose(A)):c:=add(pi[1][k],k=1..n):pi:=evalm(pi[1]/c);Omega:=stackma

> NN:=binomial(n,2):J2:=evalm(IdentityMatrix(NN)):uu:=vector(NN,1):unassign('t','e','x','tau'):t:=vector(n):phi:=diag(seq(t

> d:=rank(Delta):`rank of Delta`=d,`for n equals`=n;`rank of
  A`=rank(A);#NA:=NullSpace(Matrix(A)):NTA:=NullSpace(Matrix(transpose(A))):nu:=nullity(Delta):zeta:=vector(n,0):u=
  A",det(A),"nullspace",evalm(1/x[1]*linsolve(A,vector(n,0),'rr',x));"ker DELTA",nullspace(Delta);"A",factor(det(J-lambda*
  one-half",evalm(1/x[1]*linsolve(2*A-J,vector(n,0),'rr',x));"eigenvalue A minus
  one-half",evalm(1/x[1]*linsolve(2*A+J,vector(n,0),'rr',x));"Delta",factor(det(J-lambda*Delta));"eigenvalue Delta plus
  one-half",evalm(1/x[1]*linsolve(2*Delta-J,vector(n,0),'rr',x));"eigenvalue Delta minus one-half",evalm(1/x[1]*linsolve(2*D

> print();if(rank(A)=rank(Delta)) then print("<--> CC <-->") else print("NOT CC", "RANKDIFF",rank(A)-rank(Delta))
  fi;print();NSA:=nullspace(A);"DIM NULLSPACE OF A",nops(NSA);
```

$$R = [3,\ 3,\ 3,\ 7,\ 7,\ 7,\ 8,\ 8,\ 8,\ 2,\ 4,\ 9]$$

$$B = [6,\ 6,\ 6,\ A,\ A,\ A,\ C,\ C,\ C,\ 1,\ 5,\ 8]$$

$$\pi := \left[\frac{1}{18},\ \frac{1}{18},\ \frac{1}{9},\ \frac{1}{18},\ \frac{1}{18},\ \frac{1}{9},\ \frac{1}{9},\ \frac{1}{18},\ \frac{1}{18},\ \frac{1}{9},\ \frac{1}{9},\ \frac{1}{9}\right]$$

$$rank\ of\ Delta = 6,\ for\ n\ equals = 12$$

$$rank\ of\ A = 6$$

"<--> CC <-->"<--> CC <-->"" align="center">

$$NSA := \{[0,\ 0,\ -1,\ 0,\ 0,\ 1,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0],\ [0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 1,\ -1],\ [0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 1,\ 0,\ 0,\ -1,\ 0,\ 0],$$
$$[0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 1,\ -1,\ 0,\ 0,\ 0],\ [0,\ 0,\ 0,\ -1,\ 1,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0],\ [1,\ -1,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0,\ 0]\}$$

"DIM NULLSPACE OF A", 6

```
> print("PERIODICITY CHECK",nullspace(evalm(sympow(J,2)-sympow(A,2))));
```

"PERIODICITY CHECK", {}

```
> if(rank(A)>rank(Delta)) then  print("CONTINUE AT THE MAIN RUN") fi;

> unassign('a'):typ:=linsolve(A,vector(n,0),'rr',a);
```

$$typ := [-a_1,\ a_1,\ -a_2,\ -a_5,\ a_5,\ a_2,\ -a_4,\ -a_3,\ a_3,\ a_4,\ a_6,\ -a_6]$$

```
> a[1]:=1:a[2]:=1:a[3]:=1:a[4]:=1:a[5]:=1:a[6]:=-1:

> for k from 0 to 6 do for i in  choose(6,k) do a:=vector(6,1): if (1 in i) then next fi;for j to 6 do if(j in i) then a[j]:=-1 fi od;
```

```
> colr:={}:g:=map(eval,typ);gmat:=diag(seq(g[k],k=1..n)):

> Detta:=evalm(gmat&*A&*gmat):R:=evalm(A+Detta):B:=evalm(A-Detta):mr:=matrans(R):ex:={}:ey:={}:for i to n do
  if(mr[i]<>MR[i]) then ex:=ex union {i} else ey:=ey union {i}  fi;od;print("a",a,"g",g);print("coloring",ex,ey);if([ex,2] in
  two) then print("X2") fi; if ([ey,2] in two) then print("Y2") fi;od;od;

"a", [1, 1, 1, 1, 1, 1], "g", [-1, 1, -1, -1, 1, 1, -1, -1, 1, 1, 1, -1]

"coloring", {2, 5, 6, 7, 8, 11, 12}, {1, 3, 4, 9, 10}

"X2"

"a", [1, -1, 1, 1, 1, 1], "g", [-1, 1, 1, -1, 1, -1, -1, -1, 1, 1, 1, -1]

"coloring", {1, 5, 7, 8, 11, 12}, {2, 3, 4, 6, 9, 10}

"Y2"

"a", [1, 1, -1, 1, 1, 1], "g", [-1, 1, -1, -1, 1, 1, -1, 1, -1, 1, 1, -1]

"coloring", {2, 5, 6, 7, 9, 11}, {1, 3, 4, 8, 10, 12}

"X2"

"a", [1, 1, 1, -1, 1, 1], "g", [-1, 1, -1, -1, 1, 1, 1, -1, 1, -1, 1, -1]

"coloring", {2, 4, 8, 10, 11, 12}, {1, 3, 5, 6, 7, 9}

"X2"

"a", [1, 1, 1, 1, -1, 1], "g", [-1, 1, -1, 1, -1, 1, -1, -1, 1, 1, 1, -1]

"coloring", {2, 4, 6, 7, 8, 12}, {1, 3, 5, 9, 10, 11}

"X2"

"a", [1, 1, 1, 1, 1, -1], "g", [-1, 1, -1, -1, 1, 1, -1, -1, 1, 1, -1, 1]

"coloring", {2, 5, 6, 9}, {1, 3, 4, 7, 8, 10, 11, 12}

"X2"

"a", [1, -1, -1, 1, 1, 1], "g", [-1, 1, 1, -1, 1, -1, -1, 1, -1, 1, 1, -1]

"coloring", {1, 5, 7, 9, 11}, {2, 3, 4, 6, 8, 10, 12}

"Y2"

"a", [1, -1, 1, -1, 1, 1], "g", [-1, 1, 1, -1, 1, -1, 1, -1, 1, -1, 1, -1]

"coloring", {1, 4, 6, 8, 10, 11, 12}, {2, 3, 5, 7, 9}

"Y2"

"a", [1, -1, 1, 1, -1, 1], "g", [-1, 1, 1, 1, -1, -1, -1, -1, 1, 1, 1, -1]

"coloring", {1, 4, 7, 8, 12}, {2, 3, 5, 6, 9, 10, 11}

"Y2"

"a", [1, -1, 1, 1, 1, -1], "g", [-1, 1, 1, -1, 1, -1, -1, -1, 1, 1, -1, 1]

"coloring", {1, 5, 9}, {2, 3, 4, 6, 7, 8, 10, 11, 12}

"Y2"

"a", [1, 1, -1, -1, 1, 1], "g", [-1, 1, -1, -1, 1, 1, 1, 1, -1, -1, 1, -1]

"coloring", {2, 4, 9, 10, 11}, {1, 3, 5, 6, 7, 8, 12}
```

"X2"

"a", [1, 1, -1, 1, -1, 1], "g", [-1, 1, -1, 1, -1, 1, -1, 1, -1, 1, 1, -1]

"coloring", {2, 4, 6, 7, 9}, {1, 3, 5, 8, 10, 11, 12}

"X2"

"a", [1, 1, -1, 1, 1, -1], "g", [-1, 1, -1, -1, 1, 1, -1, 1, -1, 1, -1, 1]

"coloring", {2, 5, 6, 8, 12}, {1, 3, 4, 7, 9, 10, 11}

"X2"

"a", [1, 1, 1, -1, -1, 1], "g", [-1, 1, -1, 1, -1, 1, 1, -1, 1, -1, 1, -1]

"coloring", {2, 5, 8, 10, 12}, {1, 3, 4, 6, 7, 9, 11}

"X2"

"a", [1, 1, 1, -1, 1, -1], "g", [-1, 1, -1, -1, 1, 1, 1, -1, 1, -1, -1, 1]

"coloring", {2, 4, 7, 9, 10}, {1, 3, 5, 6, 8, 11, 12}

"X2"

"a", [1, 1, 1, 1, -1, -1], "g", [-1, 1, -1, 1, -1, 1, -1, -1, 1, 1, -1, 1]

"coloring", {2, 4, 6, 9, 11}, {1, 3, 5, 7, 8, 10, 12}

"X2"

"a", [1, -1, -1, -1, 1, 1], "g", [-1, 1, 1, -1, 1, -1, 1, 1, -1, -1, 1, -1]

"coloring", {1, 4, 6, 9, 10, 11}, {2, 3, 5, 7, 8, 12}

"Y2"

"a", [1, -1, -1, 1, -1, 1], "g", [-1, 1, 1, 1, -1, -1, -1, 1, -1, 1, 1, -1]

"coloring", {1, 4, 7, 9}, {2, 3, 5, 6, 8, 10, 11, 12}

"Y2"

"a", [1, -1, -1, 1, 1, -1], "g", [-1, 1, 1, -1, 1, -1, -1, 1, -1, 1, -1, 1]

"coloring", {1, 5, 8, 12}, {2, 3, 4, 6, 7, 9, 10, 11}

"Y2"

"a", [1, -1, 1, -1, -1, 1], "g", [-1, 1, 1, 1, -1, -1, 1, -1, 1, -1, 1, -1]

"coloring", {1, 5, 6, 8, 10, 12}, {2, 3, 4, 7, 9, 11}

"Y2"

"a", [1, -1, 1, -1, 1, -1], "g", [-1, 1, 1, -1, 1, -1, 1, -1, 1, -1, -1, 1]

"coloring", {1, 4, 6, 7, 9, 10}, {2, 3, 5, 8, 11, 12}

"Y2"

"a", [1, -1, 1, 1, -1, -1], "g", [-1, 1, 1, 1, -1, -1, -1, -1, 1, 1, -1, 1]

"coloring", {1, 4, 9, 11}, {2, 3, 5, 6, 7, 8, 10, 12}

"Y2"

"a", [1, 1, -1, -1, -1, 1], "g", [-1, 1, -1, 1, -1, 1, 1, 1, -1, -1, 1, -1]

"coloring", {2, 5, 9, 10}, {1, 3, 4, 6, 7, 8, 11, 12}

"X2"

"a", [1, 1, -1, -1, 1, -1], "g", [-1, 1, -1, -1, 1, 1, 1, 1, -1, -1, -1, 1]

"coloring", {2, 4, 7, 8, 10, 12}, {1, 3, 5, 6, 9, 11}

"X2"

"a", [1, 1, -1, 1, -1, -1], "g", [-1, 1, -1, 1, -1, 1, -1, 1, -1, 1, -1, 1]

"coloring", {2, 4, 6, 8, 11, 12}, {1, 3, 5, 7, 9, 10}

"X2"

"a", [1, 1, 1, -1, -1, -1], "g", [-1, 1, -1, 1, -1, 1, 1, -1, 1, -1, -1, 1]

"coloring", {2, 5, 7, 9, 10, 11}, {1, 3, 4, 6, 8, 12}

"X2"

"a", [1, -1, -1, -1, -1, 1], "g", [-1, 1, 1, 1, -1, -1, 1, 1, -1, -1, 1, -1]

"coloring", {1, 5, 6, 9, 10}, {2, 3, 4, 7, 8, 11, 12}

"Y2"

"a", [1, -1, -1, -1, 1, -1], "g", [-1, 1, 1, -1, 1, -1, 1, 1, -1, -1, -1, 1]

"coloring", {1, 4, 6, 7, 8, 10, 12}, {2, 3, 5, 9, 11}

"Y2"

"a", [1, -1, -1, 1, -1, -1], "g", [-1, 1, 1, 1, -1, -1, -1, 1, -1, 1, -1, 1]

"coloring", {1, 4, 8, 11, 12}, {2, 3, 5, 6, 7, 9, 10}

"Y2"

"a", [1, -1, 1, -1, -1, -1], "g", [-1, 1, 1, 1, -1, -1, 1, -1, 1, -1, -1, 1]

"coloring", {1, 5, 6, 7, 9, 10, 11}, {2, 3, 4, 8, 12}

"Y2"

"a", [1, 1, -1, -1, -1, -1], "g", [-1, 1, -1, 1, -1, 1, 1, 1, -1, -1, -1, 1]

"coloring", {2, 5, 7, 8, 10, 11, 12}, {1, 3, 4, 6, 9}

"X2"

"a", [1, -1, -1, -1, -1, -1], "g", [-1, 1, 1, 1, -1, -1, 1, 1, -1, -1, -1, 1]

"coloring", {1, 5, 6, 7, 8, 10, 11, 12}, {2, 3, 4, 9}

"Y2"

FIRST RUN STARTS HERE

```
> NN:=binomial(n,2):J2:=evalm(IdentityMatrix(NN)):uu:=vector(NN,1):UJ:=matrix(n,n,1):unassign('t','e','x','tau'):t:=vector(

> Nmat:=evalm(1/2*UJ-matrix(n,n,(i,j)->1/2*g[i]*g[j]));u2:=vector(NN):c:=1:for i to n-1 do for j from i+1 to n do
  u2[c]:=Nmat[i,j];c:=c+1;od:od:

> q:=evalm(pi&*Nmat)[1]:"RANK",1/(1-q);"PI-R-Nmat",multiply(pi,R,Nmat),"PI-B-Nmat",multiply(pi,B,Nmat);

> AA:=sympow(A,2):D2:=sympow(Detta,2):A2:=evalm(AA+D2):multiply(AA,u2);"det",det(J2-A2);evalm(multiply(A2-J2,u
```

> "current u2";evalm(u2);NJA:=nullspace(J2-A2);"DIM FIXED POINTS",nops(NJA);

```
         [0  1  1  1  0  0  1  1  0  0  1  0]
         [1  0  0  0  1  1  0  0  1  1  0  1]
         [1  0  0  0  1  1  0  0  1  1  0  1]
         [1  0  0  0  1  1  0  0  1  1  0  1]
         [0  1  1  1  0  0  1  1  0  0  1  0]
         [0  1  1  1  0  0  1  1  0  0  1  0]
Nmat :=  [1  0  0  0  1  1  0  0  1  1  0  1]
         [1  0  0  0  1  1  0  0  1  1  0  1]
         [0  1  1  1  0  0  1  1  0  0  1  0]
         [0  1  1  1  0  0  1  1  0  0  1  0]
         [1  0  0  0  1  1  0  0  1  1  0  1]
         [0  1  1  1  0  0  1  1  0  0  1  0]

"RANK", 2

"PI-R-Nmat", [1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2], "PI-B-Nmat", [1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2]

[1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2,
  1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2, 1/2]

"det", 0

[0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"current u2"

[1, 1, 1, 0, 0, 1, 1, 0, 0, 1, 0, 0, 0, 1, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 1, 0, 1, 1, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 0, 1,
  1, 0, 0, 1, 0, 0, 1, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1]

NJA := {[1, 1, 1, 0, 0, 1, 1, 0, 0, 1, 0, 0, 0, 1, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 1, 0, 1, 1, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0,
  1, 0, 1, 1, 0, 0, 1, 0, 0, 1, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1]}

"DIM FIXED POINTS", 1
```

> if (nops(NJA)>1) then xx:=vector(NN,1):for i to NN do xx[i]:=NJA[1][i]*NJA[2][i] od:print(iszero(xx));

> AB2:=abel(A2) ;

> pi2:=evalm(uu&*AB2):print("pi2",evalm(pi2));u2:=evalm(AB2&*uu):print("u2",evalm(u2));m:=max(seq(u2[k],k=1..NN)):

> N:=matvec(u2):q:=evalm(pi&*N)[1]:print("RANK",1/(1-q/m));print("PI-R-N",multiply(pi,R,N),"PI-B-N",multiply(pi,B,N)

> fi:

> matrans(R),matrans(B);RClass:=readVec(evalm(u+g));BClass:=readVec(evalm(u-g));

```
[6, 3, 3, 7, A, A, B, B, C, 1, 4, 9], [3, 6, 6, A, 7, 7, C, C, B, 2, 5, 8]

RClass := {1, 5, 6, 9, 10, 12}

BClass := {2, 3, 4, 7, 8, 11}
```

> UT(Matrix(R),Matrix(B));

Error, (in UT) invalid subscript selector

+=============+++++++++=+===== MAIN SET HERE ======+++++++++=+=============+++++++++=

```
> NN:=binomial(n,2):J2:=evalm(IdentityMatrix(NN)):uu:=vector(NN,1):UJ:=matrix(n,n,1):unassign('t','e','x','tau'):t:=vector(

> unassign('e','a','w'):pi:=evalm(1/w[1]*linsolve(J-transpose(A),vector(n,0),'r',w));d:=rank(Delta):`rank of Delta`=d,`for n eq
  A`=rank(A);NA:=NullSpace(Matrix(A)):NTA:=NullSpace(Matrix(transpose(A))):nu:=nullity(Delta):zeta:=vector(n,0):u=v

> #apart:=ecliffe(evalm(2*(symult(A,J)+symult(Delta,J))));liecliff(n):#ydet:=collect(trace(multiply(Y,apart)),[seq(x[k],k=1..n

> ISX:=NullSpace(Matrix(transpose(evalm(Delta)))):ND:=NullSpace(Matrix(Delta)):

> CA:=r->if r>0 then concat(seq(NA[q],q=1..r))  else "" fi:CTA:=r->if r>0 then concat(seq(NTA[q],q=1..r))  else "" fi:

> "ker A",CA(nullity(A)),"ker Tr A",CTA(nullity(A)),"ker Delta",concat(seq(ND[q],q=1..nullity(Delta))),"ker  tr
  Delta",concat(seq(ISX[q],q=1..nullity(Delta)));
```

PROCEDURES Sigma diag signs and MATADJ(mat,rownum) are here

```
> sig:=multiply(pi,u):spi:=evalm(pi/sig);Omega:=stackmatrix(seq(spi,q=1..n)):#Hpi:=multiply(spi,F);Fpi:=multiply(spi,QD)
```

J2 and AA are defined here also all ones JJ then PI and EI. NN is n-choose-2.

```
> unassign('x'):#q:=vector(NL):qq:=multiply(q,EI):vv:=linsolve(transpose(EI),spi,'r','x');
```

$$\pi := [1, 1, 2, 1, 1, 2, 2, 1, 1, 2, 2, 2]$$

$$\mathit{rank\ of\ Delta} = 6,\ \mathit{for\ n\ equals} = 12$$

$$\mathit{rank\ of\ A} = 6$$

$$\text{"Delta"},\begin{bmatrix} 0 & 0 & -1 & 0 & 0 & 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & -1 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & -1 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1 & 0 & 0 & -1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & -1 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & -1 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1 & -1 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & -1 & 1 \\ 1 & -1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & -1 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & -1 & 1 & 0 & 0 & 0 \end{bmatrix}$$

$$\text{"ker A"},\begin{bmatrix} 0 & 0 & -1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & -1 & 0 \\ 0 & 0 & 0 & -1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ -1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & -1 \\ 0 & 0 & 0 & 0 & 0 & 1 \\ 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \end{bmatrix},\ \text{"ker Tr A"},\begin{bmatrix} 0 & 0 & 0 & 0 & -1 & -1 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1 \\ -1 & -1 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & -1 & -1 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix},\ \text{"ker Delta"},\begin{bmatrix} 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 1 & 0 \end{bmatrix},\ \text{"ker tr Delta"},$$

$$\begin{bmatrix} 0 & 0 & -1 & -1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & -1 & -1 \\ 0 & 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 0 & 1 & 0 \\ -1 & -1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 & 0 \\ 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

$$spi := \left[\frac{1}{18}, \frac{1}{18}, \frac{1}{9}, \frac{1}{18}, \frac{1}{18}, \frac{1}{9}, \frac{1}{9}, \frac{1}{18}, \frac{1}{18}, \frac{1}{9}, \frac{1}{9}, \frac{1}{9} \right]$$

TEMPLATE HERE

```
> matrans(RR),matrans(BB);count:=0:R:=evalm(RR):B:=evalm(BB):if(rank(A)<>rank(Delta)) then print("NOT A CC
  GRAPH");print();else print("CC GRAPH") fi;

> J:=evalm(IdentityMatrix(n)):unassign('t','s'):chply:={}:colrs:={}:NSA:=nullspace(A):"NullSpace for
  A",NSA;XAX:=symult(A,J):cc:={}:rg:={}:

> AA:=sympow(A,2):EA:=eigenvalues(A):EAV:=map(evalf,[EA]):EVA:=map(abs,EAV):MA:=max(seq(EVA[k],k=1..nops(E
  A",EAV);print("abs vals",EVA);print("max",MA);print("charpoly",factor(charpoly(A,t)),"minpoly",factor(minpoly(A,s)));

> N2:=binomial(n,2):J2:=evalm(IdentityMatrix(N2)):u:=vector(n,1):uu:=vector(N2,1):ee:=vector(n,1):for k from 0 to n do
  for i in  choose(n,k) do ee:=vector(n,1): if (1 in i) then next fi;for j to n do if(j in i) then ee[j]:=-1 fi
  od;phi:=diag(seq(ee[q],q=1..n));dl:=multiply(phi,Delta);D2:=sympow(dl,2);A2:=evalm(AA+D2):

> count:=count+1;if( (count mod 20)=0) then

> print(`=============================================================================`);print();

> print(count,ee);fi;sw:=false:if(det(J2-A2)=0) then

> print(`=============================================================================`);print();

> dim:=nops(nullspace(J2-A2));

> if(dim>1) then AB:=abel(A2):u2:=evalm(AB&*uu) ;pi2:=evalm(uu&*AB):print("FIXED POINTS DIM ",dim) else
  u2:=evalm(1/x[1]*linsolve(J2-A2,vector(N2,0),'rr',x));pi2:=evalm(1/x[1]*linsolve(J2-transpose(A2),vector(N2,0),'rr',x));
  fi;

> vx:=readVec(u2);ux:=evalm(u2/u2[vx[1]]);

> for i to N2 do if ( (ux[i]<>1) and (ux[i]<>0)) then print("SANDWICH");sw:=true; break;fi od;if(not sw) then
  print("RIGHT GROUP") fi;

> m:=max(seq(u2[k],k=1..NN)):NX:=matvec(u2);rh:=multiply(spi,NX):rk:=m/(m-rh[1]):pp:=multiply(NX,u/m):COLR:=read
  then colrs:=colrs union {[COLR,rk]}; else  if(rk<n) then rg:=rg union {[COLR,rk]} else rg:=rg union {[COLR,rk,"group"]} f
  fi;RX:=evalm(A+dl):BX:=evalm(A-dl):

> print("Coloring",COLR,"RANK",rk);print("R",matrans(RX),"B",matrans(BX)); print("pi2",pi2);print("u2",u2,"dim",dim);p
  Rk:=sympow(RX,rk):Bk:=sympow(BX,rk):Ak:=evalm(1/2*(Rk+Bk));nk:=binomial(n,rk):jk:=evalm(IdentityMatrix(nk)):u|
  print("pi"||rk,pi||rk);print("u"||rk,u||rk);fi; if(iszero(symult(dl,J)-XAX)) then print("COLORING IS CC");cc:=cc union

> print(`=============================================================================`);print();
```

> "SANDWICH SUMMARY",nops(colrs);print(colrs);print();"RG SUMMARY",nops(rg);print(rg);

> print("SUMMARY: NON-SYNCED CC",nops(cc));print(cc);

[3, 3, 3, 7, 7, 7, B, B, B, 2, 4, 9], [6, 6, 6, A, A, A, C, C, C, 1, 5, 8]

"CC GRAPH"

"NullSpace for A", {[0, 0, 0, 0, 0, 0, 0, -1, 1, 0, 0, 0], [0, 0, 0, 0, 0, 0, -1, 0, 0, 1, 0, 0], [-1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0], [0, 0, 0, -1, 1, 0, 0, 0, 0, 0, 0, 0], [0, 0, -1, 0, 0, 1, 0, 0, 0, 0, 0, 0], [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, -1, 1]}

"spec A", [0., 0., 0., 0., 0., 0., 0., 1., -0.5000000000, 0.6299605250, -0.3149802625 + 0.5455618182 I, -0.3149802625 - 0.5455618182 I]

"abs vals", [0., 0., 0., 0., 0., 0., 0., 1., 0.5000000000, 0.6299605250, 0.6299605251, 0.6299605251]

"max", 1.

"charpoly", $\frac{1}{8}\, t^7\,(t-1)\,(2\,t+1)\,(4\,t^3-1)$, "minpoly", $\frac{1}{8}\, s^2\,(s-1)\,(2\,s+1)\,(4\,s^3-1)$

==

20, [1, -1, 1, 1, 1, 1, 1, 1, 1, -1, 1, 1]

==

40, [1, 1, 1, 1, -1, -1, 1, 1, 1, 1, 1, 1]

==

60, [1, 1, 1, 1, 1, 1, 1, -1, 1, 1, -1, 1]

==

80, [1, -1, 1, -1, 1, 1, 1, -1, 1, 1, 1, 1]

==

100, [1, -1, 1, 1, 1, 1, -1, 1, 1, -1, 1, 1]

==

120, [1, 1, -1, -1, 1, 1, 1, 1, 1, 1, 1, -1]

==

"RIGHT GROUP"

"Coloring", {3, 6, 7}, "RANK", 9

"R", [3, 3, 6, 7, 7, A, C, B, B, 2, 4, 9], "B", [6, 6, 3, A, A, 7, B, C, C, 1, 5, 8]

"pi2", [0, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

==

140, [1, 1, -1, 1, 1, 1, 1, -1, 1, -1, 1, 1]

160, [1, 1, 1, -1, 1, -1, 1, 1, 1, 1, -1, 1]

180, [1, 1, 1, 1, -1, -1, 1, 1, 1, -1, 1, 1]

200, [1, 1, 1, 1, 1, -1, -1, 1, 1, -1, 1, 1]

220, [1, 1, 1, 1, 1, 1, -1, 1, 1, -1, -1, 1]

"RIGHT GROUP"

"Coloring", {2, 3, 4, 9}, "RANK", 2

"R", [3, 6, 6, A, 7, 7, B, B, C, 2, 4, 9], "B", [6, 3, 3, 7, A, A, C, C, B, 1, 5, 8]

"pi2", $\left[0, \frac{75}{52}, 0, 0, 0, \frac{5}{13}, \frac{20}{13}, 0, 0, 0, 2, 0, 0, 0, \frac{75}{52}, 0, 0, \frac{20}{13}, \frac{5}{13}, 2, 0, 0, \frac{55}{26}, \frac{75}{52}, 0, 0, 1, \frac{5}{2}, \frac{29}{13}, 0, 0, \frac{55}{26}, 0, 0, \frac{49}{52}, \frac{10}{13}, \frac{20}{13}, 0, 0, \frac{10}{13}, \frac{49}{52}, 0, 0, 0, \frac{20}{13}, \frac{5}{2}, 1, 0, 0, 0, \frac{29}{13}, 0, \frac{49}{26}, \frac{55}{26}, \frac{40}{13}, 0, 0, \frac{49}{26}, 0, 0, 0, 0, 0, 0, \frac{40}{13}, \frac{49}{26} \right]$

"u2", [1, 1, 1, 0, 0, 1, 1, 0, 0, 0, 1, 0, 0, 1, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1, 0, 0, 1, 1, 1, 0, 1, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1, 0, 0, 0, 1, 1, 1, 0, 0, 0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 0, 0, 0, 1, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

240, [1, -1, -1, -1, 1, 1, 1, 1, 1, 1, 1, -1]

260, [1, -1, -1, 1, 1, 1, 1, -1, 1, -1, 1, 1]

280, [1, -1, 1, -1, 1, -1, 1, 1, 1, 1, -1, 1]

"RIGHT GROUP"

"Coloring", {2, 5, 6, 9}, "RANK", 2

"R", [3, 6, 3, 7, A, A, B, B, C, 2, 4, 9], "B", [6, 3, 6, A, 7, 7, C, C, B, 1, 5, 8]

"pi2", $\left[0, 0, 0, 6, \frac{17}{2}, 0, 0, 0, 2, 0, 2, \frac{17}{2}, 6, 0, 0, 2, 0, 0, 0, 2, 0, 0, 1, \frac{17}{2}, 0, 0, 2, 15, 0, 2, 0, 1, 0, 0, \frac{3}{2}, 4, 0, 6, 0, 4, \frac{3}{2}, 0, 0, 6, 0, 15, 2, 0, 0, 2, 0, 0, 3, 1, 0, 12, 0, 3, 0, 12, 0, 12, 0, 12, 0, 3 \right]$

"u2", [1, 0, 0, 1, 1, 0, 0, 1, 1, 0, 1, 1, 1, 0, 0, 1, 1, 0, 0, 1, 0, 0, 1, 1, 0, 0, 1, 1, 0, 1, 1, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 0, 1, 1, 0, 0, 1, 0, 0, 1, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

300, [1, -1, 1, 1, -1, -1, 1, 1, 1, -1, 1, 1]

"RIGHT GROUP"

"Coloring", {2, 5, 9, 10}, "RANK", 2

"R", [3, 6, 3, 7, A, 7, B, B, C, 1, 4, 9], "B", [6, 3, 6, A, 7, A, C, C, B, 2, 5, 8]

"pi2", $\left[0, 0, 2, 0, 2, 4, 0, 0, 0, \frac{26}{5}, 0, 2, 0, 2, 0, 0, 0, 0, 4, 0, \frac{26}{5}, 6, 0, 2, 7, \frac{13}{5}, 0, 0, \frac{34}{5}, 0, 0, 0, 0, 0, \frac{11}{5}, 1, 0, 2, 6, 1, \frac{11}{5}, 0, 0, 2, 0, 0, 0, \frac{13}{5}, 7, 0, \frac{34}{5}, 0, \frac{22}{5}, 6, 0, 4, 0, \frac{22}{5}, 0, 4, 0, 4, 0, 4, 0, \frac{22}{5}\right]$

"u2", [1, 0, 1, 0, 1, 1, 1, 0, 0, 1, 0, 1, 0, 1, 0, 0, 0, 1, 1, 0, 1, 1, 0, 1, 1, 1, 0, 0, 1, 0, 1, 0, 0, 0, 1, 1, 0, 1, 1, 1, 1, 0, 0, 1, 0, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

==

320, [1, -1, 1, 1, 1, -1, -1, 1, 1, -1, 1, 1]

==

340, [1, -1, 1, 1, 1, 1, -1, 1, 1, -1, -1, 1]

==

"RIGHT GROUP"

"Coloring", {3, 4, 5, 7}, "RANK", 9

"R", [3, 3, 6, A, A, 7, C, B, B, 2, 4, 9], "B", [6, 6, 3, 7, 7, A, B, C, C, 1, 5, 8]

"pi2", [0, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

==

360, [1, 1, -1, -1, 1, -1, -1, 1, 1, 1, 1, 1]

==

380, [1, 1, -1, -1, 1, 1, 1, 1, 1, 1, -1, -1]

==

400, [1, 1, -1, 1, -1, 1, 1, 1, 1, -1, 1, -1]

==

"RIGHT GROUP"

"Coloring", {3, 6, 7, 10}, "RANK", 9

"R", [3, 3, 6, 7, 7, A, C, B, B, 1, 4, 9], "B", [6, 6, 3, A, A, 7, B, C, C, 2, 5, 8]

"pi2", [0, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,

```
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                    "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

                    ==========================================================================

                                        "RIGHT GROUP"

                            "Coloring", {3, 6, 7, 11}, "RANK", 9

                "R", [3, 3, 6, 7, 7, A, C, B, B, 2, 5, 9], "B", [6, 6, 3, A, A, 7, B, C, C, 1, 4, 8]

"pi2", [0, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                    "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

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                                        "RIGHT GROUP"

                            "Coloring", {3, 6, 7, 12}, "RANK", 9

                "R", [3, 3, 6, 7, 7, A, C, B, B, 2, 4, 8], "B", [6, 6, 3, A, A, 7, B, C, C, 1, 5, 9]

"pi2", [0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                    "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

                    ==========================================================================

                                        "RIGHT GROUP"

                            "Coloring", {3, 6, 8, 9}, "RANK", 9

                "R", [3, 3, 6, 7, 7, A, B, C, C, 2, 4, 9], "B", [6, 6, 3, A, A, 7, C, B, B, 1, 5, 8]

"pi2", [0, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]
```

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

==

420, [1, 1, -1, 1, 1, 1, -1, -1, 1, 1, 1, -1]

==

440, [1, 1, 1, -1, -1, -1, 1, 1, 1, -1, 1, 1]

==

460, [1, 1, 1, -1, 1, -1, -1, 1, 1, -1, 1, 1]

==

480, [1, 1, 1, -1, 1, 1, -1, 1, 1, -1, -1, 1]

==

500, [1, 1, 1, 1, -1, -1, 1, -1, 1, 1, -1, 1]

==

520, [1, 1, 1, 1, -1, 1, 1, -1, -1, 1, 1, -1]

==

540, [1, 1, 1, 1, 1, -1, 1, -1, -1, 1, 1, -1]

==

560, [1, 1, 1, 1, 1, 1, 1, -1, -1, 1, -1, -1]

==

580, [1, -1, -1, -1, 1, 1, -1, 1, 1, 1, 1, -1]

==

"RIGHT GROUP"

"Coloring", {2, 3, 4, 8, 12}, "RANK", 2

"R", [*3*, *6*, *6*, *A*, *7*, *7*, *B*, *C*, *B*, *2*, *4*, *8*], "B", [*6*, *3*, *3*, *7*, *A*, *A*, *C*, *B*, *C*, *1*, *5*, *9*]

"pi2", $\left[0, \frac{75}{49}, 0, 0, 0, \frac{20}{49}, 0, \frac{80}{49}, 0, 0, \frac{104}{49}, 0, 0, 0, \frac{75}{49}, 0, \frac{80}{49}, 0, \frac{20}{49}, \frac{104}{49}, 0, 0, \frac{110}{49}, \frac{75}{49}, 0, \frac{52}{49}, 0, \frac{130}{49}, \frac{116}{49}, 0, 0, \frac{110}{49}, 0, 1, 0, \frac{40}{49}, \frac{80}{49}, 0, 0, \frac{40}{49}, 0, 1, 0, 0, \frac{80}{49}, \frac{130}{49}, 0, \frac{52}{49}, 0, 0, \frac{116}{49}, 2, 0, \frac{110}{49}, \frac{160}{49}, 0, 0, 0, 0, 0, 2, 0, 0, 0, \frac{160}{49}, 2\right]$

"u2", [1, 1, 1, 0, 0, 1, 0, 1, 0, 0, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 0, 1, 0, 0,
1, 1, 0, 1, 0, 0, 1, 1, 0, 1, 1, 0, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

==

"RIGHT GROUP"

"Coloring", {2, 3, 5, 7, 9}, "RANK", 2

"R", [3, 6, 6, 7, A, 7, C, B, C, 2, 4, 9], "B", [6, 3, 3, A, 7, A, B, C, B, 1, 5, 8]

"pi2", $\left[0, \frac{17}{2}, 0, 6, 0, 2, 0, 0, 0, 2, 0, 0, 6, 0, \frac{17}{2}, 0, 0, 0, 2, 0, 2, 1, 0, \frac{17}{2}, 0, 2, 0, 15, 0, 2, 0, 0, 4, 0, \frac{3}{2}, 0, 6, 0, 1, 0, \frac{3}{2}, 0, 4, 0, 6, 15, 0, 2, 0, 2, 0, 3, 0, 1, 0, 12, 0, 0, 12, 0, 3, 0, 12, 12, 0, 3\right]$

"u2", [1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

600, [1, -1, -1, 1, -1, 1, -1, 1, 1, 1, -1, 1]

"RIGHT GROUP"

"Coloring", {2, 3, 5, 9, 11}, "RANK", 2

"R", [3, 6, 6, 7, A, 7, B, B, C, 2, 5, 9], "B", [6, 3, 3, A, 7, A, C, C, B, 1, 4, 8]

"pi2", $\left[0, \frac{75}{49}, 0, 0, 0, \frac{20}{49}, \frac{80}{49}, 0, 0, 0, \frac{104}{49}, 0, 0, 0, \frac{75}{49}, 0, 0, \frac{80}{49}, \frac{20}{49}, \frac{104}{49}, 0, \frac{110}{49}, 0, \frac{75}{49}, 0, 0, \frac{52}{49}, \frac{130}{49}, \frac{116}{49}, 0, 0, 0, \frac{40}{49}, 1, 0, 0, 0, \frac{80}{49}, \frac{110}{49}, 0, 0, 1, \frac{40}{49}, \frac{80}{49}, 0, \frac{130}{49}, \frac{52}{49}, 0, 0, 0, \frac{116}{49}, 0, 2, \frac{110}{49}, \frac{160}{49}, 0, 0, 2, 0, 0, 0, 0, 0, 0, \frac{160}{49}, 2\right]$

"u2", [1, 1, 0, 1, 0, 1, 1, 0, 0, 0, 1, 0, 1, 0, 1, 0, 0, 1, 1, 1, 0, 1, 0, 0, 1, 1, 1, 0, 1, 0, 1, 1, 0, 0, 0, 1, 1, 0, 0, 1, 1, 1, 0, 1, 1, 0, 0, 0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 0, 0, 0, 1, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

620, [1, -1, -1, 1, 1, -1, 1, -1, 1, 1, 1, -1]

640, [1, -1, -1, 1, 1, 1, 1, -1, 1, -1, -1, 1]

660, [1, -1, 1, -1, -1, 1, 1, -1, 1, 1, -1, 1]

"RIGHT GROUP"

"Coloring", {2, 4, 6, 7, 9}, "RANK", 2

"R", [3, 6, 3, A, 7, A, C, B, C, 2, 4, 9], "B", [6, 3, 6, 7, A, 7, B, C, B, 1, 5, 8]

"pi2", $\left[0, 0, 0, 0, \frac{75}{49}, 0, \frac{80}{49}, 0, \frac{20}{49}, \frac{104}{49}, 0, \frac{75}{49}, 0, 0, 0, \frac{20}{49}, 0, \frac{80}{49}, 0, 0, \frac{104}{49}, \frac{110}{49}, 0, \frac{75}{49}, 0, \frac{52}{49}, 0, \frac{130}{49}, \frac{116}{49}, 0, 0, 0, \frac{40}{49}, 0, 1, 0, 0, \frac{80}{49}, \frac{110}{49}, 0, 1, 0, \frac{40}{49}, \frac{80}{49}, 0, \frac{130}{49}, 0, \frac{52}{49}, 0, 0, \frac{116}{49}, 2, 0, \frac{110}{49}, \frac{160}{49}, 0, 0, 0, 0, 0, 2, 0, 0, 0, \frac{160}{49}, 2\right]$

"u2", [1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 0, 1, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 0, 1, 1, 0, 1, 1, 0, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

"RIGHT GROUP"

"Coloring", {2, 4, 6, 9, 11}, "RANK", 2

"R", [3, 6, 3, A, 7, A, B, B, C, 2, 5, 9], "B", [6, 3, 6, 7, A, 7, C, C, B, 1, 4, 8]

"pi2", $\left[0, 0, 6, 0, \frac{17}{2}, 0, 0, 0, 2, 0, 2, \frac{17}{2}, 0, 6, 0, 2, 0, 0, 0, 2, 0, 1, 0, \frac{17}{2}, 0, 0, 2, 15, 0, 2, 0, 0, 4, \frac{3}{2}, 0, 0, 6, 0, 1, 0, 0, \frac{3}{2}, 4, 0, 6, 15, 2, 0, 0, 2, 0, 0, 3, 1, 0, 12, 0, 3, 0, 12, 0, 12, 0, 12, 0, 3 \right]$

"u2", [1, 0, 1, 0, 1, 0, 0, 1, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 0, 1, 0, 1, 0, 0, 1, 1, 0, 1, 1, 0, 1, 1, 0, 0, 1, 0, 1, 0, 0, 1, 1, 0, 1, 1, 1, 0, 0, 1, 0, 0, 1, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

680, [1, -1, 1, -1, 1, -1, 1, 1, 1, -1, -1, 1]

"RIGHT GROUP"

"Coloring", {2, 4, 7, 9, 10}, "RANK", 2

"R", [3, 6, 3, A, 7, 7, C, B, C, 1, 4, 9], "B", [6, 3, 6, 7, A, A, B, C, B, 2, 5, 8]

"pi2", $\left[0, 0, 0, 0, 1, 2, 0, \frac{3}{2}, 0, 0, \frac{1}{2}, 1, 0, 0, 0, 0, \frac{3}{2}, 0, 2, \frac{1}{2}, 0, 0, \frac{1}{4}, 1, \frac{9}{8}, 0, \frac{19}{8}, 0, 0, \frac{17}{4}, 0, \frac{1}{4}, \frac{23}{8}, 0, \frac{3}{8}, 0, 0, \frac{3}{2}, 0, 0, \frac{3}{8}, 0, \frac{23}{8}, \frac{3}{2}, 0, 0, \frac{19}{8}, 0, \frac{9}{8}, \frac{17}{4}, 0, \frac{3}{4}, 0, \frac{1}{4}, 3, 0, 0, 0, 0, 0, \frac{3}{4}, 0, 0, 0, 3, \frac{3}{4} \right]$

"u2", [1, 0, 0, 1, 1, 1, 0, 1, 0, 0, 1, 1, 1, 0, 0, 0, 1, 0, 1, 1, 0, 0, 1, 1, 1, 0, 1, 0, 0, 1, 1, 1, 1, 0, 1, 0, 0, 1, 0, 0, 1, 0, 1, 1, 0, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

"RIGHT GROUP"

"Coloring", {2, 4, 9, 10, 11}, "RANK", 2

"R", [3, 6, 3, A, 7, 7, B, B, C, 1, 5, 9], "B", [6, 3, 6, 7, A, A, C, C, B, 2, 4, 8]

"pi2", $\left[0, 0, 0, 1, 1, 2, 0, 0, 0, \frac{13}{5}, 0, 1, 1, 0, 0, 0, 0, 0, 2, 0, \frac{13}{5}, 0, 3, 1, \frac{7}{2}, \frac{13}{10}, 0, 0, \frac{17}{5}, 0, 0, 3, \frac{1}{2}, \frac{11}{10}, 0, 0, 1, 0, 0, 0, 0, \frac{11}{10}, \frac{1}{2}, 0, 1, 0, 0, \frac{13}{10}, \frac{7}{2}, 0, \frac{17}{5}, 0, \frac{11}{5}, 3, 0, 2, 0, \frac{11}{5}, 0, 2, 0, 2, 0, 2, 0, \frac{11}{5} \right]$

"u2", [1, 0, 0, 1, 1, 1, 1, 0, 0, 1, 0, 1, 1, 0, 0, 0, 0, 1, 1, 0, 1, 0, 1, 1, 1, 1, 0, 0, 1, 0, 1, 1, 1, 1, 0, 0, 1, 0, 0, 0, 0, 1, 1, 0, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

700, [1, -1, 1, -1, 1, 1, 1, 1, -1, -1, 1, -1]

"RIGHT GROUP"

"Coloring", {2, 5, 6, 8, 12}, "RANK", 2

"R", [3, 6, 3, 7, A, A, B, C, B, 2, 4, 8], "B", [6, 3, 6, A, 7, 7, C, B, C, 1, 5, 9]

"pi2", $\left[0, 0, 0, \frac{12}{17}, 1, 0, 0, 0, \frac{4}{17}, 0, \frac{4}{17}, 1, \frac{12}{17}, 0, 0, \frac{4}{17}, 0, 0, 0, \frac{4}{17}, 0, 0, \frac{2}{17}, 1, 0, \frac{4}{17}, 0, \frac{30}{17}, 0, \frac{4}{17}, 0, \frac{2}{17}, 0, \frac{3}{17}, 0, \frac{8}{17}, 0, \frac{12}{17}, 0, \frac{8}{17}, 0, \frac{3}{17}, 0, \frac{12}{17}, 0, \frac{30}{17}, 0, \frac{4}{17}, 0, \frac{4}{17}, 0, \frac{6}{17}, 0, \frac{2}{17}, 0, \frac{24}{17}, 0, 0, \frac{24}{17}, 0, \frac{6}{17}, 0, \frac{24}{17}, \frac{24}{17}, 0, \frac{6}{17} \right]$

"u2", [1, 0, 0, 1, 1, 0, 1, 0, 1, 0, 1, 1, 1, 0, 0, 1, 0, 1, 0, 1, 0, 0, 1, 1, 0, 1, 0, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

==

720, [1, -1, 1, 1, -1, 1, -1, -1, 1, 1, -1, 1]

==

"RIGHT GROUP"

"Coloring", {2, 5, 8, 10, 12}, "RANK", 2

"R", [3, 6, 3, 7, A, 7, B, C, B, 1, 4, 8], "B", [6, 3, 6, A, 7, A, C, B, C, 2, 5, 9]

$$\text{"pi2"}, \left[0, 0, 1, 0, 1, 2, 0, 0, 0, \frac{13}{5}, 0, 1, 0, 1, 0, 0, 0, 0, 2, 0, \frac{13}{5}, 3, 0, 1, \frac{7}{2}, 0, \frac{13}{10}, 0, \frac{17}{5}, 0, 0, 0, 0, \frac{11}{10}, 0, \frac{1}{2}, 0, 1, 3, \frac{1}{2}, 0, \frac{11}{10}, 0, 1, 0, 0, \frac{13}{10}, 0, \frac{7}{2}, 0, \frac{17}{5}, \frac{11}{5}, 0, 3, 0, 2, 0, 0, 2, 0, \frac{11}{5}, 0, 2, 2, 0, \frac{11}{5}\right]$$

"u2", [1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 0, 1, 0, 1, 0, 1, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 0, 1, 0, 1, 0, 1, 1, 1, 0, 1, 0, 1,
0, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

==

740, [1, -1, 1, 1, 1, -1, -1, -1, 1, 1, -1, 1]

==

760, [1, -1, 1, 1, 1, 1, -1, -1, -1, 1, 1, -1]

==

780, [1, 1, -1, -1, -1, 1, -1, 1, -1, 1, 1, 1]

==

"RIGHT GROUP"

"Coloring", {3, 4, 5, 7, 10}, "RANK", 9

"R", [3, 3, 6, A, A, 7, C, B, B, 1, 4, 9], "B", [6, 6, 3, 7, 7, A, B, C, C, 2, 5, 8]

"pi2", [0, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

==

"RIGHT GROUP"

"Coloring", {3, 4, 5, 7, 11}, "RANK", 9

"R", [3, 3, 6, A, A, 7, C, B, B, 2, 5, 9], "B", [6, 6, 3, 7, 7, A, B, C, C, 1, 4, 8]

"pi2", [0, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,

```
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

==========================================================================

"RIGHT GROUP"

"Coloring", {3, 4, 5, 7, 12}, "RANK", 9

"R", [3, 3, 6, A, A, 7, C, B, B, 2, 4, 8], "B", [6, 6, 3, 7, 7, A, B, C, C, 1, 5, 9]

"pi2", [0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

==========================================================================

"RIGHT GROUP"

"Coloring", {3, 4, 5, 8, 9}, "RANK", 9

"R", [3, 3, 6, A, A, 7, B, C, C, 2, 4, 9], "B", [6, 6, 3, 7, 7, A, C, B, B, 1, 5, 8]

"pi2", [0, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
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==========================================================================

800, [1, 1, -1, -1, 1, -1, 1, -1, 1, -1, 1, 1]

==========================================================================

820, [1, 1, -1, -1, 1, 1, 1, -1, -1, 1, -1, 1]

==========================================================================
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```
                        840, [1, 1, -1, 1, -1, -1, 1, 1, -1, 1, 1, -1]

            ==================================================================

                        860, [1, 1, -1, 1, -1, 1, 1, 1, -1, -1, -1, 1]

            ==================================================================

                                    "RIGHT GROUP"

                      "Coloring", {3, 6, 7, 10, 11}, "RANK", 9

            "R", [3, 3, 6, 7, 7, A, C, B, B, 1, 5, 9], "B", [6, 6, 3, A, A, 7, B, C, C, 2, 4, 8]

"pi2", [0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                  "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
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"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
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  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

            ==================================================================

                                    "RIGHT GROUP"

                      "Coloring", {3, 6, 7, 10, 12}, "RANK", 9

            "R", [3, 3, 6, 7, 7, A, C, B, B, 1, 4, 8], "B", [6, 6, 3, A, A, 7, B, C, C, 2, 5, 9]

"pi2", [0, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                  "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
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  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

            ==================================================================

                                    "RIGHT GROUP"

                      "Coloring", {3, 6, 7, 11, 12}, "RANK", 9

            "R", [3, 3, 6, 7, 7, A, C, B, B, 2, 5, 8], "B", [6, 6, 3, A, A, 7, B, C, C, 1, 4, 9]

"pi2", [0, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                  "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
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  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
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0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"RIGHT GROUP"

"Coloring", {3, 6, 8, 9, 10}, "RANK", 9

"R", [3, 3, 6, 7, 7, A, B, C, C, 1, 4, 9], "B", [6, 6, 3, A, A, 7, C, B, B, 2, 5, 8]

"pi2", [0, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
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0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
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"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
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0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"RIGHT GROUP"

"Coloring", {3, 6, 8, 9, 11}, "RANK", 9

"R", [3, 3, 6, 7, 7, A, B, C, C, 2, 5, 9], "B", [6, 6, 3, A, A, 7, C, B, B, 1, 4, 8]

"pi2", [0, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
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"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
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"RIGHT GROUP"

"Coloring", {3, 6, 8, 9, 12}, "RANK", 9

"R", [3, 3, 6, 7, 7, A, B, C, C, 2, 4, 8], "B", [6, 6, 3, A, A, 7, C, B, B, 1, 5, 9]

"pi2", [0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,

0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

==

880, [1, 1, -1, 1, 1, -1, 1, 1, -1, -1, -1, 1]

==

900, [1, 1, 1, -1, -1, -1, -1, 1, -1, 1, 1, 1]

==

920, [1, 1, 1, -1, -1, 1, -1, 1, -1, 1, 1, -1]

==

940, [1, 1, 1, -1, 1, -1, -1, 1, -1, 1, 1, -1]

==

960, [1, 1, 1, -1, 1, 1, -1, 1, -1, -1, -1, 1]

==

980, [1, 1, 1, 1, -1, -1, 1, -1, -1, 1, -1, 1]

==

1000, [1, 1, 1, 1, -1, 1, 1, -1, -1, -1, 1, -1]

==

1020, [1, 1, 1, 1, 1, 1, -1, -1, -1, -1, 1, -1]

==

1040, [1, -1, -1, -1, -1, 1, 1, 1, -1, -1, 1, 1]

==

"RIGHT GROUP"

"Coloring", {2, 3, 4, 6, 9, 10}, "RANK", 2

"R", [*3*, *6*, *6*, *A*, *7*, *A*, *B*, *B*, *C*, *1*, *4*, *9*], "B", [*6*, *3*, *3*, *7*, *A*, *7*, *C*, *C*, *B*, *2*, *5*, *8*]

"pi2", $\left[\, 0, 1, 0, 0, 0, 0, 0, \frac{3}{2}, 2, \frac{1}{2}, 0, 0, 0, 0, 1, 2, \frac{3}{2}, 0, 0, 0, \frac{1}{2}, \frac{1}{4}, 0, 1, \frac{9}{8}, \frac{19}{8}, 0, 0, 0, \frac{17}{4}, 0, 0, 0, 0, \frac{3}{8}, \frac{23}{8}, \frac{3}{2}, 0, \frac{1}{4}, \frac{23}{8}, \frac{3}{8}, 0, 0, 0, \frac{3}{2}, 0, 0, \frac{19}{8}, \frac{9}{8}, \frac{17}{4}, 0, 0, \frac{3}{4}, \frac{1}{4}, 3, 0, 0, \frac{3}{4}, 0, 0, 0, 0, 0, 0, 3, \frac{3}{4}\right]$

"u2", [1, 1, 0, 1, 0, 0, 0, 1, 1, 1, 0, 0, 1, 0, 1, 1, 1, 0, 0, 0, 1, 1, 0, 1, 1, 1, 0, 0, 0, 1, 1, 0, 0, 0, 1, 1, 1, 0, 1, 1, 1, 0, 0, 0,
1, 0, 0, 1, 1, 1, 0, 0, 1, 1, 1, 0, 1, 1, 1, 0, 0, 0, 1, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

==

1060, [1, -1, -1, -1, 1, -1, 1, 1, 1, 1, -1, -1]

==

"RIGHT GROUP"

"Coloring", {2, 3, 4, 7, 9, 11}, "RANK", 2

"R", [3, 6, 6, A, 7, 7, C, B, C, 2, 5, 9], "B", [6, 3, 3, 7, A, A, B, C, B, 1, 4, 8]

"pi2", $\left[0, 1, \frac{12}{17}, 0, 0, \frac{4}{17}, 0, 0, 0, \frac{4}{17}, 0, 0, 0, \frac{12}{17}, 1, 0, 0, 0, \frac{4}{17}, 0, \frac{4}{17}, 0, \frac{2}{17}, 1, 0, \frac{4}{17}, 0, \frac{30}{17}, 0, \frac{4}{17}, 0, \frac{2}{17}, 0, \frac{3}{17}, 0, \frac{8}{17}, 0, \frac{12}{17}, 0, \frac{8}{17}, 0, \frac{3}{17}, 0, \frac{12}{17}, 0, \frac{30}{17}, 0, \frac{4}{17}, 0, \frac{4}{17}, 0, \frac{6}{17}, 0, \frac{2}{17}, 0, \frac{24}{17}, 0, 0, \frac{24}{17}, 0, \frac{6}{17}, 0, \frac{24}{17}, \frac{24}{17}, 0, \frac{6}{17} \right]$

"u2", [1, 1, 1, 0, 0, 1, 0, 1, 0, 1, 0, 0, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

1080, [1, -1, -1, -1, 1, 1, 1, 1, 1, -1, -1, -1]

"RIGHT GROUP"

"Coloring", {2, 3, 5, 7, 8, 12}, "RANK", 2

"R", [3, 6, 6, 7, A, 7, C, C, B, 2, 4, 8], "B", [6, 3, 3, A, 7, A, B, B, C, 1, 5, 9]

"pi2", $\left[0, \frac{17}{2}, 0, 6, 0, 2, 0, 0, 0, 2, 0, 0, 6, 0, \frac{17}{2}, 0, 0, 0, 2, 0, 2, 1, 0, \frac{17}{2}, 0, 0, 2, 15, 0, 2, 0, 0, 4, \frac{3}{2}, 0, 0, 6, 0, 1, 0, 0, \frac{3}{2}, 4, 0, 6, 15, 2, 0, 0, 2, 0, 0, 3, 1, 0, 12, 0, 3, 0, 12, 0, 12, 0, 12, 0, 3 \right]$

"u2", [1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 0, 0, 1, 0, 1, 0, 0, 1, 1, 0, 1, 1, 0, 1, 0, 0, 1, 1, 0, 1, 1, 0, 1, 1, 0, 0, 1, 0, 1, 0, 0, 1, 1, 0, 1, 1, 1, 1, 0, 0, 1, 0, 0, 1, 1, 0, 1, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

1100, [1, -1, -1, 1, -1, 1, -1, 1, -1, -1, 1, 1]

"RIGHT GROUP"

"Coloring", {2, 3, 5, 8, 11, 12}, "RANK", 2

"R", [3, 6, 6, 7, A, 7, B, C, B, 2, 5, 8], "B", [6, 3, 3, A, 7, A, C, B, C, 1, 4, 9]

"pi2", $\left[0, \frac{75}{49}, 0, 0, 0, \frac{20}{49}, 0, \frac{80}{49}, 0, 0, \frac{104}{49}, 0, 0, 0, \frac{75}{49}, 0, \frac{80}{49}, 0, \frac{20}{49}, \frac{104}{49}, 0, \frac{110}{49}, 0, \frac{75}{49}, 0, \frac{52}{49}, 0, \frac{130}{49}, \frac{116}{49}, 0, 0, 0, \frac{40}{49}, 0, 1, 0, 0, \frac{80}{49}, \frac{110}{49}, 0, 1, 0, \frac{40}{49}, \frac{80}{49}, 0, \frac{130}{49}, 0, \frac{52}{49}, 0, 0, \frac{116}{49}, 2, 0, \frac{110}{49}, \frac{160}{49}, 0, 0, 0, 0, 0, 2, 0, 0, 0, \frac{160}{49}, 2 \right]$

"u2", [1, 1, 0, 1, 0, 1, 0, 1, 0, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 0, 1, 1, 0, 1, 1, 0, 1, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1, 0, 1, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

1120, [1, -1, -1, 1, 1, -1, -1, 1, -1, -1, 1, 1]

1140, [1, -1, -1, 1, 1, 1, -1, -1, 1, -1, 1, -1]

1160, [1, -1, 1, -1, -1, -1, 1, 1, -1, -1, 1, 1]

1180, [1, -1, 1, -1, -1, 1, 1, -1, 1, -1, 1, -1]

"RIGHT GROUP"

"Coloring", {2, 4, 6, 7, 8, 12}, "RANK", 2

"R", [3, 6, 3, A, 7, A, C, C, B, 2, 4, 8], "B", [6, 3, 6, 7, A, 7, B, B, C, 1, 5, 9]

"pi2", $\left[0, 0, 0, 0, \frac{75}{49}, 0, 0, \frac{80}{49}, \frac{20}{49}, \frac{104}{49}, 0, \frac{75}{49}, 0, 0, 0, \frac{20}{49}, \frac{80}{49}, 0, 0, 0, \frac{104}{49}, \frac{110}{49}, 0, \frac{75}{49}, 0, 0, \frac{52}{49}, \frac{130}{49}, \frac{116}{49}, 0, 0, 0, \frac{40}{49}, 1, 0, 0, 0, \frac{80}{49}, \frac{110}{49}, 0, 0, 1, \frac{40}{49}, \frac{80}{49}, 0, \frac{130}{49}, \frac{52}{49}, 0, 0, 0, \frac{116}{49}, 0, 2, \frac{110}{49}, \frac{160}{49}, 0, 0, 2, 0, 0, 0, 0, 0, 0, \frac{160}{49}, 2 \right]$

"u2", [1, 0, 1, 0, 1, 0, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 1, 0, 0, 0, 1, 1, 0, 1, 0, 0, 1, 1, 1, 0, 1, 0, 1, 1, 0, 0, 0, 1, 1, 0, 0, 1, 1, 1, 0, 1, 1, 0, 0, 0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 0, 0, 0, 1, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

1200, [1, -1, 1, -1, 1, -1, 1, -1, 1, -1, 1, -1]

"RIGHT GROUP"

"Coloring", {2, 4, 6, 8, 11, 12}, "RANK", 2

"R", [3, 6, 3, A, 7, A, B, C, B, 2, 5, 8], "B", [6, 3, 6, 7, A, 7, C, B, C, 1, 4, 9]

"pi2", $\left[0, 0, \frac{12}{17}, 0, 1, 0, 0, 0, \frac{4}{17}, 0, \frac{4}{17}, 1, 0, \frac{12}{17}, 0, \frac{4}{17}, 0, 0, 0, \frac{4}{17}, 0, \frac{2}{17}, 0, 1, 0, \frac{4}{17}, 0, \frac{30}{17}, 0, \frac{4}{17}, 0, 0, \frac{8}{17}, 0, \frac{3}{17}, 0, \frac{12}{17}, 0, \frac{2}{17}, 0, \frac{3}{17}, 0, \frac{8}{17}, 0, \frac{12}{17}, \frac{30}{17}, 0, \frac{4}{17}, 0, \frac{4}{17}, 0, \frac{6}{17}, 0, \frac{2}{17}, 0, \frac{24}{17}, 0, 0, \frac{24}{17}, 0, \frac{6}{17}, 0, \frac{24}{17}, \frac{24}{17}, 0, \frac{6}{17} \right]$

"u2", [1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

"RIGHT GROUP"

"Coloring", {2, 4, 7, 8, 10, 12}, "RANK", 2

"R", [3, 6, 3, A, 7, 7, C, C, B, 1, 4, 8], "B", [6, 3, 6, 7, A, A, B, B, C, 2, 5, 9]

"pi2", $\left[0, 0, 0, 0, 1, 2, \frac{3}{2}, 0, 0, 0, \frac{1}{2}, 1, 0, 0, 0, 0, 0, \frac{3}{2}, 2, \frac{1}{2}, 0, 0, \frac{1}{4}, 1, \frac{9}{8}, \frac{19}{8}, 0, 0, 0, \frac{17}{4}, 0, \frac{1}{4}, \frac{23}{8}, \frac{3}{8}, 0, 0, 0, \frac{3}{2}, 0, 0, 0, \frac{3}{8}, \frac{23}{8}, \frac{3}{2}, 0, 0, 0, \frac{19}{8}, \frac{9}{8}, \frac{17}{4}, 0, 0, \frac{3}{4}, \frac{1}{4}, 3, 0, 0, \frac{3}{4}, 0, 0, 0, 0, 0, 0, 3, \frac{3}{4} \right]$

"u2", [1, 0, 0, 1, 1, 1, 1, 0, 0, 0, 1, 1, 1, 0, 0, 0, 0, 1, 1, 1, 0, 0, 1, 1, 1, 1, 0, 0, 0, 1, 1, 1, 1, 1, 0, 0, 0, 1, 0, 0, 0, 1, 1, 1, 0, 0, 0, 1, 1, 1, 0, 0, 1, 1, 1, 0, 1, 1, 1, 0, 0, 0, 1, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

"RIGHT GROUP"

"Coloring", {2, 4, 8, 10, 11, 12}, "RANK", 2

"R", [3, 6, 3, A, 7, 7, B, C, B, 1, 5, 8], "B", [6, 3, 6, 7, A, A, C, B, C, 2, 4, 9]

"pi2", $\left[0, 0, 0, 1, 1, 2, 0, 0, 0, \frac{13}{5}, 0, 1, 1, 0, 0, 0, 0, 0, 2, 0, \frac{13}{5}, 0, 3, 1, \frac{7}{2}, 0, \frac{13}{10}, 0, \frac{17}{5}, 0, 0, 3, \frac{1}{2}, 0, \frac{11}{10}, 0, 1, 0, 0, 0, \frac{11}{10}, 0, \frac{1}{2}, 0, 1, 0, \frac{13}{10}, 0, \frac{7}{2}, 0, \frac{17}{5}, \frac{11}{5}, 0, 3, 0, 2, 0, 0, 2, 0, \frac{11}{5}, 0, 2, 2, 0, \frac{11}{5} \right]$

"u2", [1, 0, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 1, 0, 0, 0, 1, 0, 1, 0, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 0, 0, 1, 0, 1, 0,

1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

==

1220, [1, -1, 1, -1, 1, 1, 1, 1, -1, -1, -1, -1]

==

"RIGHT GROUP"

"Coloring", {2, 5, 6, 7, 9, 11}, "RANK", 2

"R", [*3*, *6*, *3*, *7*, *A*, *A*, *C*, *B*, *C*, *2*, *5*, *9*], "B", [*6*, *3*, *6*, *A*, *7*, *7*, *B*, *C*, *B*, *1*, *4*, *8*]

$$\text{"pi2"}, \left[0, 0, 0, 0, \frac{15}{4}, 0, 4, 0, 1, \frac{26}{5}, 0, \frac{15}{4}, 0, 0, 0, 1, 0, 4, 0, 0, \frac{26}{5}, 0, \frac{11}{2}, \frac{15}{4}, 0, \frac{13}{5}, 0, \frac{13}{2}, \frac{29}{5}, 0, 0, \frac{11}{2}, 0, \frac{49}{20}, 0, 2, 4, 0, 0, 2, 0, \frac{49}{20}, 0, 0, 4, \frac{13}{2}, 0, \frac{13}{5}, 0, 0, \frac{29}{5}, \frac{49}{10}, 0, \frac{11}{2}, 8, 0, 0, 0, 0, 0, \frac{49}{10}, 0, 0, 0, 8, \frac{49}{10}\right]$$

"u2", [1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 1, 0, 0, 1, 0, 1, 0, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 0, 1, 0, 0, 1, 1, 0, 1, 0, 0, 1, 1, 0, 1, 1, 0, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

==

1240, [1, -1, 1, 1, -1, -1, 1, 1, 1, -1, -1, -1]

==

"RIGHT GROUP"

"Coloring", {2, 5, 7, 9, 10, 11}, "RANK", 2

"R", [*3*, *6*, *3*, *7*, *A*, *7*, *C*, *B*, *C*, *1*, *5*, *9*], "B", [*6*, *3*, *6*, *A*, *7*, *A*, *B*, *C*, *B*, *2*, *4*, *8*]

$$\text{"pi2"}, \left[0, 0, 0, 0, 1, 2, 0, \frac{3}{2}, 0, 0, \frac{1}{2}, 1, 0, 0, 0, 0, \frac{3}{2}, 0, 2, \frac{1}{2}, 0, \frac{1}{4}, 0, 1, \frac{9}{8}, 0, \frac{19}{8}, 0, 0, \frac{17}{4}, 0, 0, 0, \frac{3}{8}, 0, \frac{23}{8}, \frac{3}{2}, 0, \frac{1}{4}, \frac{23}{8}, 0, \frac{3}{8}, 0, 0, \frac{3}{2}, 0, \frac{19}{8}, 0, \frac{9}{8}, \frac{17}{4}, 0, \frac{3}{4}, 0, \frac{1}{4}, 3, 0, 0, 0, 0, 0, \frac{3}{4}, 0, 0, 0, 3, \frac{3}{4}\right]$$

"u2", [1, 0, 1, 0, 1, 1, 0, 1, 0, 0, 1, 1, 0, 1, 0, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 0, 1, 1, 0, 0, 1, 0, 1, 1, 0, 1, 1, 0, 1, 0, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

==

1260, [1, -1, 1, 1, 1, -1, -1, -1, 1, -1, 1, -1]

==

1280, [1, 1, -1, -1, -1, -1, -1, 1, 1, 1, -1, 1]

==

"RIGHT GROUP"

"Coloring", {3, 4, 5, 7, 10, 11}, "RANK", 9

"R", [*3*, *3*, *6*, *A*, *A*, *7*, *C*, *B*, *B*, *1*, *5*, *9*], "B", [*6*, *6*, *3*, *7*, *7*, *A*, *B*, *C*, *C*, *2*, *4*, *8*]

"pi2", [0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,

```
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

                    ===================================================================

                                  1300, [1, 1, -1, -1, -1, 1, -1, 1, 1, -1, 1, -1]

                    ===================================================================

                                            "RIGHT GROUP"

                              "Coloring", {3, 4, 5, 7, 10, 12}, "RANK", 9

                   "R", [3, 3, 6, A, A, 7, C, B, B, 1, 4, 8], "B", [6, 6, 3, 7, 7, A, B, C, C, 2, 5, 9]

"pi2", [0, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                           "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

                    ===================================================================

                                            "RIGHT GROUP"

                              "Coloring", {3, 4, 5, 7, 11, 12}, "RANK", 9

                   "R", [3, 3, 6, A, A, 7, C, B, B, 2, 5, 8], "B", [6, 6, 3, 7, 7, A, B, C, C, 1, 4, 9]

"pi2", [0, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                           "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

                    ===================================================================

                                            "RIGHT GROUP"

                               "Coloring", {3, 4, 5, 8, 9, 10}, "RANK", 9

                   "R", [3, 3, 6, A, A, 7, B, C, C, 1, 4, 9], "B", [6, 6, 3, 7, 7, A, C, B, B, 2, 5, 8]

"pi2", [0, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
```

1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

==

"RIGHT GROUP"

"Coloring", {3, 4, 5, 8, 9, 11}, "RANK", 9

"R", [*3*, *3*, *6*, *A*, *A*, *7*, *B*, *C*, *C*, *2*, *5*, *9*], "B", [*6*, *6*, *3*, *7*, *7*, *A*, *C*, *B*, *B*, *1*, *4*, *8*]

"pi2", [0, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

==

"RIGHT GROUP"

"Coloring", {3, 4, 5, 8, 9, 12}, "RANK", 9

"R", [*3*, *3*, *6*, *A*, *A*, *7*, *B*, *C*, *C*, *2*, *4*, *8*], "B", [*6*, *6*, *3*, *7*, *7*, *A*, *C*, *B*, *B*, *1*, *5*, *9*]

"pi2", [0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

==

1320, [1, 1, -1, -1, 1, -1, -1, 1, 1, -1, 1, -1]

==

1340, [1, 1, -1, -1, 1, 1, -1, 1, -1, 1, -1, -1]

==

1360, [1, 1, -1, 1, -1, -1, 1, -1, 1, -1, -1, 1]

===

1380, [1, 1, -1, 1, -1, 1, 1, -1, 1, -1, -1, -1]

===

"RIGHT GROUP"

"Coloring", {3, 6, 7, 10, 11, 12}, "RANK", 9

"R", [*3*, *3*, *6*, *7*, *7*, *A*, *C*, *B*, *B*, *1*, *5*, *8*], "B", [*6*, *6*, *3*, *A*, *A*, *7*, *B*, *C*, *C*, *2*, *4*, *9*]

"pi2", [0, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

===

"RIGHT GROUP"

"Coloring", {3, 6, 8, 9, 10, 11}, "RANK", 9

"R", [*3*, *3*, *6*, *7*, *7*, *A*, *B*, *C*, *C*, *1*, *5*, *9*], "B", [*6*, *6*, *3*, *A*, *A*, *7*, *C*, *B*, *B*, *2*, *4*, *8*]

"pi2", [0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

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"RIGHT GROUP"

"Coloring", {3, 6, 8, 9, 10, 12}, "RANK", 9

"R", [*3*, *3*, *6*, *7*, *7*, *A*, *B*, *C*, *C*, *1*, *4*, *8*], "B", [*6*, *6*, *3*, *A*, *A*, *7*, *C*, *B*, *B*, *2*, *5*, *9*]

"pi2", [0, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,

0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

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"RIGHT GROUP"

"Coloring", {3, 6, 8, 9, 11, 12}, "RANK", 9

"R", [*3*, *3*, *6*, *7*, *7*, *A*, *B*, *C*, *C*, *2*, *5*, *8*], "B", [*6*, *6*, *3*, *A*, *A*, *7*, *C*, *B*, *B*, *1*, *4*, *9*]

"pi2", [0, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

==

1400, [1, 1, -1, 1, 1, 1, -1, -1, 1, -1, -1, -1]

==

1420, [1, 1, 1, -1, -1, -1, 1, 1, -1, -1, 1, -1]

==

1440, [1, 1, 1, -1, 1, -1, -1, -1, -1, 1, 1, -1]

==

1460, [1, 1, 1, 1, -1, -1, -1, -1, -1, 1, -1, 1]

==

1480, [1, 1, 1, 1, 1, -1, -1, -1, -1, -1, -1, 1]

==

1500, [1, -1, -1, -1, -1, -1, 1, 1, 1, -1, 1, -1]

==

1520, [1, -1, -1, -1, -1, 1, 1, 1, -1, 1, -1, -1]

==

"RIGHT GROUP"

"Coloring", {2, 3, 4, 6, 8, 10, 12}, "RANK", 2

"R", [*3*, *6*, *6*, *A*, *7*, *A*, *B*, *C*, *B*, *1*, *4*, *8*], "B", [*6*, *3*, *3*, *7*, *A*, *7*, *C*, *B*, *C*, *2*, *5*, *9*]

"pi2", $\Big[\, 0, 1, 0, 0, 0, 0, \frac{3}{2}, 0, 2, \frac{1}{2}, 0, 0, 0, 0, 1, 2, 0, \frac{3}{2}, 0, 0, \frac{1}{2}, \frac{1}{4}, 0, 1, \frac{9}{8}, 0, \frac{19}{8}, 0, 0, \frac{17}{4}, 0, 0, 0, \frac{3}{8}, 0, \frac{23}{8}, \frac{3}{2}, 0, \frac{1}{4}, \frac{23}{8}, 0,$

$\frac{3}{8}, 0, 0, \frac{3}{2}, 0, \frac{19}{8}, 0, \frac{9}{8}, \frac{17}{4}, 0, \frac{3}{4}, 0, \frac{1}{4}, 3, 0, 0, 0, 0, 0, \frac{3}{4}, 0, 0, 0, 3, \frac{3}{4}\Big]$

"u2", [1, 1, 0, 1, 0, 0, 1, 0, 1, 1, 0, 0, 1, 0, 1, 1, 0, 1, 0, 0, 1, 1, 0, 1, 1, 0, 1, 0, 0, 1, 1, 0, 0, 1, 0, 1, 1, 0, 1, 1, 0, 1, 0, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

1540, [1, -1, -1, -1, 1, -1, 1, 1, -1, 1, -1, -1]

"RIGHT GROUP"

"Coloring", {2, 3, 4, 7, 8, 11, 12}, "RANK", 2

"R", [3, 6, 6, A, 7, 7, C, C, B, 2, 5, 8], "B", [6, 3, 3, 7, A, A, B, B, C, 1, 4, 9]

"pi2", $\Big[$ 0, 1, $\frac{12}{17}$, 0, 0, $\frac{4}{17}$, 0, 0, 0, $\frac{4}{17}$, 0, 0, 0, $\frac{12}{17}$, 1, 0, 0, 0, $\frac{4}{17}$, 0, $\frac{4}{17}$, 0, $\frac{2}{17}$, 1, 0, 0, $\frac{4}{17}$, $\frac{30}{17}$, 0, $\frac{4}{17}$, 0, $\frac{2}{17}$, 0, 0, $\frac{3}{17}$, $\frac{8}{17}$, 0, $\frac{12}{17}$, 0, $\frac{8}{17}$, $\frac{3}{17}$, 0, 0, $\frac{12}{17}$, 0, $\frac{30}{17}$, $\frac{4}{17}$, 0, 0, $\frac{4}{17}$, 0, 0, $\frac{6}{17}$, $\frac{2}{17}$, 0, $\frac{24}{17}$, 0, $\frac{6}{17}$, 0, $\frac{24}{17}$, 0, $\frac{24}{17}$, 0, $\frac{24}{17}$, 0, $\frac{6}{17}\Big]$

"u2", [1, 1, 1, 0, 0, 1, 1, 0, 0, 1, 0, 0, 0, 1, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 1, 0, 1, 1, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 0, 1, 0, 1, 1, 0, 0, 1, 0, 0, 1, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

1560, [1, -1, -1, 1, -1, -1, -1, -1, 1, 1, 1, -1]

"RIGHT GROUP"

"Coloring", {2, 3, 5, 6, 7, 9, 10}, "RANK", 2

"R", [3, 6, 6, 7, A, A, C, B, C, 1, 4, 9], "B", [6, 3, 3, A, 7, 7, B, C, B, 2, 5, 8]

"pi2", $\Big[$ 0, 1, 1, 0, 0, 0, 0, 0, 2, 0, $\frac{13}{5}$, 0, 0, 1, 1, 2, 0, 0, 0, $\frac{13}{5}$, 0, 0, 3, 1, $\frac{7}{2}$, 0, $\frac{13}{10}$, 0, $\frac{17}{5}$, 0, 0, 3, $\frac{1}{2}$, 0, $\frac{11}{10}$, 0, 1, 0, 0, 0, $\frac{11}{10}$, 0, $\frac{1}{2}$, 0, 1, 0, $\frac{13}{10}$, 0, $\frac{7}{2}$, 0, $\frac{17}{5}$, $\frac{11}{5}$, 0, 3, 0, 2, 0, 0, 2, 0, $\frac{11}{5}$, 0, 2, 2, 0, $\frac{11}{5}\Big]$

"u2", [1, 1, 1, 0, 0, 0, 1, 0, 1, 0, 1, 0, 0, 1, 1, 1, 0, 1, 0, 1, 0, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 0, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

"RIGHT GROUP"

"Coloring", {2, 3, 5, 6, 9, 10, 11}, "RANK", 2

"R", [3, 6, 6, 7, A, A, B, B, C, 1, 5, 9], "B", [6, 3, 3, A, 7, 7, C, C, B, 2, 4, 8]

"pi2", $\Big[$ 0, 1, 0, 0, 0, 0, 0, $\frac{3}{2}$, 2, $\frac{1}{2}$, 0, 0, 0, 0, 1, 2, $\frac{3}{2}$, 0, 0, 0, $\frac{1}{2}$, 0, $\frac{1}{4}$, 1, $\frac{9}{8}$, $\frac{19}{8}$, 0, 0, 0, $\frac{17}{4}$, 0, $\frac{1}{4}$, $\frac{23}{8}$, $\frac{3}{8}$, 0, 0, 0, $\frac{3}{2}$, 0, 0, 0, $\frac{3}{8}$, $\frac{23}{8}$, $\frac{3}{2}$, 0, 0, 0, $\frac{19}{8}$, $\frac{9}{8}$, $\frac{17}{4}$, 0, 0, $\frac{3}{4}$, $\frac{1}{4}$, 3, 0, 0, $\frac{3}{4}$, 0, 0, 0, 0, 0, 0, 3, $\frac{3}{4}\Big]$

"u2", [1, 1, 1, 0, 0, 0, 0, 1, 1, 1, 0, 0, 0, 1, 1, 1, 1, 0, 0, 0, 1, 0, 1, 1, 1, 1, 0, 0, 0, 1, 1, 1, 1, 1, 0, 0, 0, 1, 0, 0, 0, 1, 1, 1, 0, 0, 0, 1, 1, 1, 0, 0, 1, 1, 1, 0, 1, 1, 1, 0, 0, 1, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

1580, [1, -1, -1, 1, -1, 1, -1, -1, 1, -1, -1, 1]

1600, [1, -1, -1, 1, 1, -1, -1, 1, -1, 1, -1, -1]

1620, [1, -1, 1, -1, -1, -1, -1, 1, 1, -1, -1, 1]

1640, [1, -1, 1, -1, -1, 1, -1, 1, -1, -1, 1, -1]

1660, [1, -1, 1, -1, 1, -1, 1, -1, -1, 1, -1, -1]

"RIGHT GROUP"

"Coloring", {2, 5, 6, 7, 8, 11, 12}, "RANK", 2

"R", [3, 6, 3, 7, A, A, C, C, B, 2, 5, 8], "B", [6, 3, 6, A, 7, 7, B, B, C, 1, 4, 9]

"pi2", $\left[0, 0, 0, 0, \frac{75}{49}, 0, 0, \frac{80}{49}, \frac{20}{49}, \frac{104}{49}, 0, \frac{75}{49}, 0, 0, 0, \frac{20}{49}, \frac{80}{49}, 0, 0, 0, \frac{104}{49}, 0, \frac{110}{49}, \frac{75}{49}, 0, 0, \frac{52}{49}, \frac{130}{49}, \frac{116}{49}, 0, 0, \frac{110}{49}, 0, 0, 1, \frac{40}{49}, \frac{80}{49}, 0, 0, \frac{40}{49}, 1, 0, 0, 0, \frac{80}{49}, \frac{130}{49}, \frac{52}{49}, 0, 0, 0, \frac{116}{49}, 0, 2, \frac{110}{49}, \frac{160}{49}, 0, 0, 2, 0, 0, 0, 0, 0, 0, \frac{160}{49}, 2 \right]$

"u2", [1, 0, 0, 1, 1, 0, 0, 1, 1, 1, 0, 1, 1, 0, 0, 1, 1, 0, 0, 0, 1, 0, 1, 1, 0, 0, 1, 1, 1, 0, 1, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1, 0, 0, 0, 1, 1, 1, 0, 0, 0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 0, 0, 0, 1, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

1680, [1, -1, 1, 1, -1, -1, 1, -1, -1, -1, 1, -1]

"RIGHT GROUP"

"Coloring", {2, 5, 7, 8, 10, 11, 12}, "RANK", 2

"R", [3, 6, 3, 7, A, 7, C, C, B, 1, 5, 8], "B", [6, 3, 6, A, 7, A, B, B, C, 2, 4, 9]

"pi2", $\left[0, 0, 0, 0, 1, 2, \frac{3}{2}, 0, 0, 0, \frac{1}{2}, 1, 0, 0, 0, 0, 0, \frac{3}{2}, 2, \frac{1}{2}, 0, \frac{1}{4}, 0, 1, \frac{9}{8}, \frac{19}{8}, 0, 0, 0, \frac{17}{4}, 0, 0, 0, 0, \frac{3}{8}, \frac{23}{8}, \frac{3}{2}, 0, \frac{1}{4}, \frac{23}{8}, \frac{3}{8}, 0, 0, 0, \frac{3}{2}, 0, 0, \frac{19}{8}, \frac{9}{8}, \frac{17}{4}, 0, 0, \frac{3}{4}, \frac{1}{4}, 3, 0, 0, \frac{3}{4}, 0, 0, 0, 0, 0, 0, 3, \frac{3}{4} \right]$

"u2", [1, 0, 1, 0, 1, 1, 1, 0, 0, 0, 1, 1, 0, 1, 0, 0, 0, 1, 1, 1, 0, 1, 0, 1, 1, 1, 0, 0, 0, 1, 1, 0, 0, 0, 1, 1, 1, 0, 1, 1, 1, 0, 0, 0, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1, 1, 0, 1, 1, 1, 0, 0, 1, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

1700, [1, 1, -1, -1, -1, -1, -1, -1, 1, 1, 1, -1]

1720, [1, 1, -1, -1, -1, 1, -1, -1, 1, -1, -1, 1]

"RIGHT GROUP"

"Coloring", {3, 4, 5, 7, 10, 11, 12}, "RANK", 9

```
                             "R", [3, 3, 6, A, A, 7, C, B, B, 1, 5, 8], "B", [6, 6, 3, 7, 7, A, B, C, C, 2, 4, 9]

"pi2", [0, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                                            "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

                                 ================================================================================

                                                                  "RIGHT GROUP"

                                                 "Coloring", {3, 4, 5, 8, 9, 10, 11}, "RANK", 9

                             "R", [3, 3, 6, A, A, 7, B, C, C, 1, 5, 9], "B", [6, 6, 3, 7, 7, A, C, B, B, 2, 4, 8]

"pi2", [0, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                                            "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

                                 ================================================================================

                                                                  "RIGHT GROUP"

                                                 "Coloring", {3, 4, 5, 8, 9, 10, 12}, "RANK", 9

                             "R", [3, 3, 6, A, A, 7, B, C, C, 1, 4, 8], "B", [6, 6, 3, 7, 7, A, C, B, B, 2, 5, 9]

"pi2", [0, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                                            "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

                                 ================================================================================

                                                                  "RIGHT GROUP"

                                                 "Coloring", {3, 4, 5, 8, 9, 11, 12}, "RANK", 9
```

```
                            "R", [3, 3, 6, A, A, 7, B, C, C, 2, 5, 8], "B", [6, 6, 3, 7, 7, A, C, B, B, 1, 4, 9]

"pi2", [0, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                                          "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

                                ============================================================================

                                             1740, [1, 1, -1, -1, 1, -1, -1, 1, -1, 1, -1, -1]

                                ============================================================================

                                             1760, [1, 1, -1, 1, -1, -1, -1, 1, -1, -1, 1, -1]

                                ============================================================================

                                                               "RIGHT GROUP"

                                              "Coloring", {3, 6, 8, 9, 10, 11, 12}, "RANK", 9

                            "R", [3, 3, 6, 7, 7, A, B, C, C, 1, 5, 8], "B", [6, 6, 3, A, A, 7, C, B, B, 2, 4, 9]

"pi2", [0, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
  1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
  1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

                                          "wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
  0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

                                ============================================================================

                                             1780, [1, 1, -1, 1, 1, 1, -1, -1, -1, -1, -1, -1]

                                ============================================================================

                                             1800, [1, 1, 1, -1, -1, 1, -1, 1, -1, -1, -1, -1]

                                ============================================================================

                                             1820, [1, -1, -1, -1, -1, -1, -1, -1, 1, 1, 1, -1]

                                ============================================================================

                                             1840, [1, -1, -1, -1, -1, 1, -1, -1, 1, -1, -1, 1]

                                ============================================================================

                                                               "RIGHT GROUP"

                                             "Coloring", {2, 3, 4, 6, 7, 9, 10, 11}, "RANK", 2
```

"R", [3, 6, 6, 4, 7, 4, 5, 8, 5, 1, 5, 9], "B", [6, 3, 3, 7, 4, 7, 8, 5, 8, 2, 4, 8]

"pi2", [0, 1, 0, 1, 0, 0, 0, 0, 2, 0, $\frac{13}{5}$, 0, 1, 0, 1, 2, 0, 0, 0, $\frac{13}{5}$, 0, 3, 0, 1, $\frac{7}{2}$, 0, $\frac{13}{10}$, 0, $\frac{17}{5}$, 0, 0, 0, 0, $\frac{11}{10}$, 0, $\frac{1}{2}$, 0, 1, 3, $\frac{1}{2}$, 0, $\frac{11}{10}$, 0, 1, 0, 0, $\frac{13}{10}$, 0, $\frac{7}{2}$, 0, $\frac{17}{5}$, $\frac{11}{5}$, 0, 3, 0, 2, 0, 0, 2, 0, $\frac{11}{5}$, 0, 2, 2, 0, $\frac{11}{5}$]

"u2", [1, 1, 0, 1, 0, 0, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 0, 0, 1, 0, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 0, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 0, 1, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

1860, [1, -1, -1, -1, 1, -1, -1, 1, -1, 1, -1, -1]

"RIGHT GROUP"

"Coloring", {2, 3, 5, 6, 7, 8, 10, 12}, "RANK", 2

"R", [3, 6, 6, 7, 4, 4, 5, 5, 8, 1, 4, 8], "B", [6, 3, 3, 4, 7, 7, 8, 8, 5, 2, 5, 9]

"pi2", [0, 1, 1, 0, 0, 0, 0, 0, 2, 0, $\frac{13}{5}$, 0, 0, 1, 1, 2, 0, 0, 0, $\frac{13}{5}$, 0, 0, 3, 1, $\frac{7}{2}$, $\frac{13}{10}$, 0, 0, $\frac{17}{5}$, 0, 0, 3, $\frac{1}{2}$, $\frac{11}{10}$, 0, 0, 1, 0, 0, 0, 0, $\frac{11}{10}$, $\frac{1}{2}$, 0, 1, 0, 0, $\frac{13}{10}$, $\frac{7}{2}$, 0, $\frac{17}{5}$, 0, $\frac{11}{5}$, 3, 0, 2, 0, $\frac{11}{5}$, 0, 2, 0, 2, 0, 2, 0, $\frac{11}{5}$]

"u2", [1, 1, 1, 0, 0, 0, 0, 1, 1, 0, 1, 0, 0, 1, 1, 1, 1, 0, 0, 1, 0, 0, 1, 1, 1, 1, 0, 0, 1, 0, 1, 1, 1, 1, 0, 0, 1, 0, 1, 0, 0, 0, 0, 1, 1, 0, 1, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

1880, [1, -1, -1, 1, -1, -1, -1, 1, -1, -1, 1, -1]

"RIGHT GROUP"

"Coloring", {2, 3, 5, 6, 8, 10, 11, 12}, "RANK", 2

"R", [3, 6, 6, 7, 4, 4, 8, 5, 8, 1, 5, 8], "B", [6, 3, 3, 4, 7, 7, 5, 8, 5, 2, 4, 9]

"pi2", [0, 1, 0, 0, 0, 0, $\frac{3}{2}$, 0, 2, $\frac{1}{2}$, 0, 0, 0, 0, 1, 2, 0, $\frac{3}{2}$, 0, 0, $\frac{1}{2}$, 0, $\frac{1}{4}$, 1, $\frac{9}{8}$, 0, $\frac{19}{8}$, 0, 0, $\frac{17}{4}$, 0, $\frac{1}{4}$, $\frac{23}{8}$, 0, $\frac{3}{8}$, 0, 0, $\frac{3}{2}$, 0, 0, $\frac{3}{8}$, 0, $\frac{23}{8}$, $\frac{3}{2}$, 0, 0, $\frac{19}{8}$, 0, $\frac{9}{8}$, $\frac{17}{4}$, 0, $\frac{3}{4}$, 0, $\frac{1}{4}$, 3, 0, 0, 0, 0, 0, $\frac{3}{4}$, 0, 0, 0, 3, $\frac{3}{4}$]

"u2", [1, 1, 1, 0, 0, 0, 1, 0, 1, 1, 0, 0, 0, 1, 1, 1, 0, 1, 0, 0, 1, 0, 1, 1, 1, 0, 1, 0, 0, 1, 1, 1, 1, 0, 1, 0, 0, 1, 0, 0, 1, 0, 1, 1, 0, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

1900, [1, -1, -1, 1, 1, 1, -1, -1, -1, -1, -1, -1]

1920, [1, -1, 1, -1, -1, 1, -1, 1, -1, -1, -1, -1]

1940, [1, 1, -1, -1, -1, -1, -1, -1, 1, -1, -1, 1]

"RIGHT GROUP"

"Coloring", {3, 4, 5, 8, 9, 10, 11, 12}, "RANK", 9

"R", [3, 3, 6, A, A, 7, B, C, C, 1, 5, 8], "B", [6, 6, 3, 7, 7, A, C, B, B, 2, 4, 9]

"pi2", [0, 1, 0, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1,
1, 2, 1, 1, 2, 2, 2, 1, 1, 2, 2, 2, 0, 1, 1, 1, 1, 1, 1, 2, 2, 2]

"u2", [0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1], "dim", 1

"wpp", [10, 10, 11, 10, 10, 11, 11, 10, 10, 11, 11, 11]

"pi9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

"u9", [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

==

1960, [1, 1, -1, -1, 1, -1, -1, -1, -1, 1, -1, -1]

==

1980, [1, 1, 1, -1, 1, -1, -1, -1, -1, -1, -1, -1]

==

2000, [1, -1, -1, -1, -1, 1, -1, -1, 1, -1, -1, -1]

==

"RIGHT GROUP"

"Coloring", {2, 3, 4, 6, 7, 8, 10, 11, 12}, "RANK", 2

"R", [3, 6, 6, A, 7, A, C, C, B, 1, 5, 8], "B", [6, 3, 3, 7, A, 7, B, B, C, 2, 4, 9]

"pi2", $\left[0, 1, 0, 1, 0, 0, 0, 0, 2, 0, \frac{13}{5}, 0, 1, 0, 1, 2, 0, 0, 0, \frac{13}{5}, 0, 3, 0, 1, \frac{7}{2}, \frac{13}{10}, 0, 0, \frac{17}{5}, 0, 0, 0, 0, 0, \frac{11}{10}, \frac{1}{2}, 0, 1, 3, \frac{1}{2}, \frac{11}{10}, 0, 0, 1, 0, 0, 0, \frac{13}{10}, \frac{7}{2}, 0, \frac{17}{5}, 0, \frac{11}{5}, 3, 0, 2, 0, \frac{11}{5}, 0, 2, 0, 2, 0, 2, 0, \frac{11}{5}\right]$

"u2", [1, 1, 0, 1, 0, 0, 0, 1, 1, 0, 1, 0, 1, 0, 1, 1, 1, 0, 0, 1, 0, 1, 0, 1, 1, 1, 0, 0, 1, 0, 1, 0, 0, 0, 1, 1, 0, 1, 1, 1, 1, 0, 0, 1,
0, 0, 0, 1, 1, 0, 1, 0, 1, 1, 0, 1, 1, 1, 0, 1, 0, 1, 0, 1, 0, 1], "dim", 1

"wpp", [6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6]

==

2020, [1, -1, 1, -1, -1, -1, -1, -1, -1, 1, -1, -1]

==

2040, [1, -1, -1, -1, -1, -1, -1, -1, 1, -1, -1, -1]

==

"SANDWICH SUMMARY", 0

{}

"RG SUMMARY", 64

{[{3, 6, 7}, 9], [{2, 3, 5, 9, 11}, 2], [{3, 4, 5, 8, 9}, 9], [{2, 5, 6, 9}, 2], [{3, 6, 8, 9, 11, 12}, 9], [{3, 4, 5, 8, 9, 12}, 9],
[{2, 3, 5, 6, 7, 9, 10}, 2], [{3, 6, 7, 12}, 9], [{3, 4, 5, 8, 9, 10, 12}, 9], [{3, 6, 7, 11, 12}, 9], [{2, 5, 8, 10, 12}, 2],
[{2, 4, 9, 10, 11}, 2], [{2, 3, 4, 7, 9, 11}, 2], [{3, 4, 5, 8, 9, 11, 12}, 9], [{2, 5, 9, 10}, 2], [{2, 5, 6, 8, 12}, 2],
[{2, 5, 7, 9, 10, 11}, 2], [{2, 3, 4, 6, 7, 9, 10, 11}, 2], [{3, 6, 7, 10, 11, 12}, 9], [{3, 4, 5, 7, 11, 12}, 9], [{3, 6, 7, 10}, 9],
[{2, 3, 4, 6, 8, 10, 12}, 2], [{3, 6, 7, 10, 12}, 9], [{3, 6, 8, 9}, 9], [{2, 3, 5, 6, 7, 8, 10, 12}, 2], [{2, 5, 7, 8, 10, 11, 12}, 2],
[{3, 6, 8, 9, 10}, 9], [{2, 3, 4, 7, 8, 11, 12}, 2], [{3, 6, 7, 10, 11}, 9], [{2, 4, 6, 9, 11}, 2], [{3, 6, 8, 9, 10, 12}, 9],
[{2, 3, 5, 6, 9, 10, 11}, 2], [{2, 3, 4, 8, 12}, 2], [{2, 5, 6, 7, 8, 11, 12}, 2], [{3, 4, 5, 7, 10, 11}, 9], [{3, 6, 8, 9, 10, 11}, 9],

```
[{3, 4, 5, 8, 9, 11}, 9], [{2, 4, 7, 9, 10}, 2], [{2, 5, 6, 7, 9, 11}, 2], [{3, 4, 5, 7, 11}, 9], [{3, 4, 5, 7, 10, 12}, 9],
[{3, 4, 5, 8, 9, 10, 11}, 9], [{2, 4, 6, 8, 11, 12}, 2], [{3, 4, 5, 7, 10}, 9], [{3, 6, 7, 11}, 9], [{2, 4, 7, 8, 10, 12}, 2],
[{3, 4, 5, 7, 12}, 9], [{3, 4, 5, 8, 9, 10}, 9], [{3, 6, 8, 9, 12}, 9], [{2, 4, 8, 10, 11, 12}, 2], [{2, 3, 4, 9}, 2],
[{2, 3, 4, 6, 9, 10}, 2], [{2, 3, 5, 7, 8, 12}, 2], [{3, 4, 5, 7, 10, 11, 12}, 9], [{2, 3, 5, 6, 8, 10, 11, 12}, 2],
[{2, 3, 5, 7, 9}, 2], [{2, 3, 5, 8, 11, 12}, 2], [{3, 4, 5, 8, 9, 10, 11, 12}, 9], [{3, 4, 5, 7}, 9], [{2, 4, 6, 7, 9}, 2],
[{2, 3, 4, 6, 7, 8, 10, 11, 12}, 2], [{3, 6, 8, 9, 10, 11, 12}, 9], [{2, 4, 6, 7, 8, 12}, 2], [{3, 6, 8, 9, 11}, 9]}

                                "SUMMARY: NON-SYNCED CC", 0

                                        {}
```

> nine:={}:two:={};for i to 64 do if rg[i][2]=9 then nine:=nine union {rg[i]} else two:=two union {rg[i]} fi; od:
print(nine);print(two);

```
                                    two := {}

{[{3, 6, 7}, 9], [{3, 4, 5, 8, 9}, 9], [{3, 6, 8, 9, 11, 12}, 9], [{3, 4, 5, 8, 9, 12}, 9], [{3, 6, 7, 12}, 9],
  [{3, 4, 5, 8, 9, 10, 12}, 9], [{3, 6, 7, 11, 12}, 9], [{3, 4, 5, 8, 9, 11, 12}, 9], [{3, 6, 7, 10, 11, 12}, 9],
  [{3, 4, 5, 7, 11, 12}, 9], [{3, 6, 7, 10}, 9], [{3, 6, 7, 10, 12}, 9], [{3, 6, 8, 9}, 9], [{3, 6, 8, 9, 10}, 9], [{3, 6, 7, 10, 11}, 9],
  [{3, 6, 8, 9, 10, 12}, 9], [{3, 4, 5, 7, 10, 11}, 9], [{3, 6, 8, 9, 10, 11}, 9], [{3, 4, 5, 8, 9, 11}, 9], [{3, 4, 5, 7, 11}, 9],
  [{3, 4, 5, 7, 10, 12}, 9], [{3, 4, 5, 8, 9, 10, 11}, 9], [{3, 4, 5, 7, 10}, 9], [{3, 6, 7, 11}, 9], [{3, 4, 5, 7, 12}, 9],
  [{3, 4, 5, 8, 9, 10}, 9], [{3, 6, 8, 9, 12}, 9], [{3, 4, 5, 7, 10, 11, 12}, 9], [{3, 4, 5, 8, 9, 10, 11, 12}, 9], [{3, 4, 5, 7}, 9],
  [{3, 6, 8, 9, 10, 11, 12}, 9], [{3, 6, 8, 9, 11}, 9]}

 {[{2, 3, 5, 9, 11}, 2], [{2, 5, 6, 9}, 2], [{2, 3, 5, 6, 7, 9, 10}, 2], [{2, 5, 8, 10, 12}, 2], [{2, 4, 9, 10, 11}, 2],
   [{2, 3, 4, 7, 9, 11}, 2], [{2, 5, 9, 10}, 2], [{2, 5, 6, 8, 12}, 2], [{2, 5, 7, 9, 10, 11}, 2], [{2, 3, 4, 6, 7, 9, 10, 11}, 2],
   [{2, 3, 4, 6, 8, 10, 12}, 2], [{2, 3, 5, 6, 7, 8, 10, 12}, 2], [{2, 5, 7, 8, 10, 11, 12}, 2], [{2, 3, 4, 7, 8, 11, 12}, 2],
   [{2, 4, 6, 9, 11}, 2], [{2, 3, 5, 6, 9, 10, 11}, 2], [{2, 3, 4, 8, 12}, 2], [{2, 5, 6, 7, 8, 11, 12}, 2], [{2, 4, 7, 9, 10}, 2],
   [{2, 5, 6, 7, 9, 11}, 2], [{2, 4, 6, 8, 11, 12}, 2], [{2, 4, 7, 8, 10, 12}, 2], [{2, 4, 8, 10, 11, 12}, 2], [{2, 3, 4, 9}, 2],
   [{2, 3, 4, 6, 9, 10}, 2], [{2, 3, 5, 7, 8, 12}, 2], [{2, 3, 5, 6, 8, 10, 11, 12}, 2], [{2, 3, 5, 7, 9}, 2], [{2, 3, 5, 8, 11, 12}, 2],
   [{2, 4, 6, 7, 9}, 2], [{2, 3, 4, 6, 7, 8, 10, 11, 12}, 2], [{2, 4, 6, 7, 8, 12}, 2]}
```

> nops(two);

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                                        32
```

>