**立方体截断问题**

问题描述

　　如右图所示，这是一个空心正方体（请想象用纸糊出来的正方体），每条棱的编号如图所示  
　　(图在http://166.111.138.150/fop/attach/cube.jpg)。  
  
　　考虑剪开若干条棱，请判断正方体是否会被剪成分开（即判断正方体是否会被分割成不少于2个部分）。

输入格式

　　本题包括多组数据。  
　　第一行输入一个N，表示数据组数。  
　　对于每一组数据，都包括两行。  
　　第一行输入一个n，表示总共剪开了n条棱。  
　　第二行有n个数，每个数表示剪开的棱的编号。（输入保证每条棱出现次数不超过1）

输出格式

　　对于每一组输入，输出一行。  
　　若正方体会被分割成不少于2个部分，则输出“Yes”，否则输出“No”（均不包括引号）。

样例输入

5

4

1 2 3 4

6

1 2 5 7 11 12

3

1 4 5

6

1 3 4 5 9 12

12

1 2 3 4 5 6 7 8 9 10 11 12

样例输出

Yes

Yes

No

No

Yes

C++代码

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*Powered by Graphene Richards\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

//{

#define OUTPUT\_PRECISION "%.2f"

#define LF\_PRECISION 10

#define INT\_64\_MOD "%lld"

#define UNSIGNED\_64\_MOD "%llu"

//#pragma comment(linker,"/STACK:102400000,102400000")

#include<cmath>

#include<cstdio>

#include<cstdlib>

#include<cstring>

#include<algorithm>

#include<bitset>

#include<complex>

#include<vector>

#include<iomanip>

#include<iostream>

#include<list>

#include<map>

#include<queue>

#include<set>

#include<stack>

#include<string>

#include<typeinfo>

#define FAST\_RW ios\_base::sync\_with\_stdio(0),cin.tie(0);

#define IT(x) \_\_typeof((x).begin())

#define FS(i,a) for(ll i=0;a[i];i++)

#define FE(x,ctn) for(IT(ctn)x=(ctn).begin(),CluhxSchFuDeugk=(ctn).end();x!=CluhxSchFuDeugk;x++)

#define FR(i,en) for(ll i=0,pJNwFPtlXiwFoIv=(en);i<pJNwFPtlXiwFoIv;i++)

#define FOR(i,en) for(ll i=1,SbKCIcakJTeYVqs=(en);i<=SbKCIcakJTeYVqs;i++)

#define FFR(i,x,y) for(ll i=(x),alVDbhLBoMEGSwA=(y);i<=alVDbhLBoMEGSwA;i++)

#define DFFR(i,x,y) for(ll i=(x),NWYfecAcmGBMJuU=(y);i>=NWYfecAcmGBMJuU;i--)

#define ll long long

#define ull unsigned long long

#define lf long double

#define pc putchar

#define mp make\_pair

#define pb push\_back

#define pq priority\_queue

#define fi first

#define se second

#define pii pair<int,int>

#define pdd pair<double,double>

#define lb(x) (x&(-x))

#define sqr(x) (x)\*(x)

#define all(x) (x).begin(),(x).end()

#define clr(x) memset((x),0,sizeof(x))

#define ms(x,v) memset((x),(v),sizeof(x))

#define mc(x,y) memcpy((x),(y),sizeof(y))

#define NL puts("");

#define fin(x,c) ((c).find(x)!=(c).end())

using namespace std;

template<class T1,class T2,class T3>

bool \_IN(T1 x,T2 y,T3 z){

return x<=y&&x>=z||x<=z&&x>=y;

}

ull gcd(ull a,ull b){

if(!b)return a;

while(b^=a^=b^=a%=b);

return a;

}

#ifdef wmx16835

#define NOT\_TESTING\_TEMPLATE\_CPP

#include"wmx16835.cpp"

#else

int ebtpqJsBCnTgggi;

#define LOG {

#define TEL }

#define SHOW\_TIME

#define test(...) ebtpqJsBCnTgggi

#define TEST(...) ebtpqJsBCnTgggi

#define TRY(...)

#define PF

#define PP ;

#endif

bool S(char\*a){

return scanf("%s",a)==1;

}

char DATaJNTFnlmAoya[2];

template<class T>

bool S(T&a){

const char\*x=typeid(a).name();

if(!strcmp(x,"i")||!strcmp(x,"b"))return scanf("%d",&a)==1;

else if(!strcmp(x,"j"))return scanf("%u",&a)==1;

else if(!strcmp(x,"c")){

if(scanf("%1s",DATaJNTFnlmAoya)==-1)

return 0;

a=\*DATaJNTFnlmAoya;

return 1;

}

else if(!strcmp(x,"Pc")||\*x=='A')return scanf("%s",a)==1;

else if(!strcmp(x,"f"))return scanf("%f",&a)==1;

else if(!strcmp(x,"d"))return scanf("%lf",&a)==1;

else if(!strcmp(x,"x"))return scanf(INT\_64\_MOD,&a)==1;

else if(!strcmp(x,"y"))return scanf(UNSIGNED\_64\_MOD,&a)==1;

else if(!strcmp(x,"e"))return (cin>>a)!=0;

else test("Input format error!\n");

}

void \_P(string x){

printf("%s",x.c\_str());

}

template<class T>

void \_P(T a){

const char\*x=typeid(a).name();

if(!strcmp(x,"i")||!strcmp(x,"b"))printf("%d",a);

else if(!strcmp(x,"j"))printf("%u",a);

else if(!strcmp(x,"c"))printf("%c",a);

else if(!strcmp(x,"Pc")||!strcmp(x,"PKc")||\*x=='A')printf("%s",a);

else if(!strcmp(x,"d")||!strcmp(x,"f"))printf(OUTPUT\_PRECISION,a);

else if(!strcmp(x,"x"))printf(INT\_64\_MOD,a);

else if(!strcmp(x,"y"))printf(UNSIGNED\_64\_MOD,a);

else if(!strcmp(x,"e"))cout<<setprecision(LF\_PRECISION)<<a;

else test("Output format error!\n");

}

template<class T1,class T2>

bool S(T1&a,T2&b){

return S(a)+S(b)==2;

}

template<class T1,class T2,class T3>

bool S(T1&a,T2&b,T3&c){

return S(a)+S(b)+S(c)==3;

}

template<class T1,class T2,class T3,class T4>

bool S(T1&a,T2&b,T3&c,T4&d){

return S(a)+S(b)+S(c)+S(d)==4;

}

template<class T1,class T2,class T3,class T4,class T5>

bool S(T1&a,T2&b,T3&c,T4&d,T5&e){

return S(a)+S(b)+S(c)+S(d)+S(e)==5;

}

template<class T>

void P(T a){

\_P(a);

pc(' ');

}

template<class T1,class T2>

void P(T1 a,T2 b){

\_P(a);pc(' ');

\_P(b);pc(' ');

}

template<class T>

void PN(T a){

\_P(a);

NL

}

template<class T1,class T2>

void PN(T1 a,T2 b){

\_P(a);pc(' ');

\_P(b);NL

}

template<class T1,class T2,class T3>

void PN(T1 a,T2 b,T3 c){

\_P(a);pc(' ');

\_P(b);pc(' ');

\_P(c);NL

}

template<class T1,class T2,class T3,class T4>

void PN(T1 a,T2 b,T3 c,T4 d){

\_P(a);pc(' ');

\_P(b);pc(' ');

\_P(c);pc(' ');

\_P(d);NL

}

template<class T1,class T2,class T3,class T4,class T5>

void PN(T1 a,T2 b,T3 c,T4 d,T5 e){

\_P(a);pc(' ');

\_P(b);pc(' ');

\_P(c);pc(' ');

\_P(d);pc(' ');

\_P(e);NL

}

template<class T>

void PA(T\*a,int n,char c=' '){

FR(i,n-1)\_P(a[i]),pc(c);

PN(a[n-1]);

}

template<class T>

void PA(const T&x,char c=' '){

IT(x) ita=x.begin();

FE(it,x){

\_P(\*it);

if(++ita==x.end())NL

else pc(c);

}

}

int kase;

const double pi=4\*atan(1);

const double ep=1e-9;

//}

int a[]={0,1,2,2,2,1,1,3,3,1,4,3,5};

int b[]={0,2,4,3,6,6,4,4,6,5,5,5,6};

bool av[15];

int fa[8];

int f(int x){

return x==fa[x]?x:fa[x]=f(fa[x]);

}

void unite(int x,int y){

fa[f(x)]=f(y);

}

int main(){

SHOW\_TIME

int t;

S(t);

while(t--){

FOR(i,6)fa[i]=i;

FOR(i,12)av[i]=1;

int n=0,m;

S(n);

while(n--){

S(m);

av[m]=0;

}

FOR(i,12){

if(av[i])unite(a[i],b[i]);

}

bool ok=1;

FOR(i,6)if(f(i)!=f(1)){

puts("Yes");

ok=0;

break;

}

if(ok)puts("No");

}

}

/\*\*\*\*\*\*\*\*\*Risoft corporation all rights reserved\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*Template V1.43 build 20150130\*\*\*\*\*\*\*\*\*\*\*\*\*/

C代码