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#include <fstream>
#include <cmath>
using namespace std;
ifstream f ("date.in");
ofstream g("date.out");
int s[54],p[54],v[54];
int place[18]={7,8,12,13,17,18,22,23,27,28,35,36,40,41,45,46,50,51};
int pion[7],x,num,noup,steag;
void caut(int num, int mini)
{int j=num;
  while(j>mini)
  {
    j--;
    if(j%x==0&&v[j]==0)
      {s[j]=1;pion[1]=j;j=mini;steag=1;}}
}

int main()
{ int i,j,z,d,ok,w,c,ok1,mini;
for(i=2;i<=52;i++)
{
  ok=1;
  for(d=2;d*d<=i;d++)
    if(i%d==0)
      ok=0;
  if(ok==0)
    p[i]=1;}

  for(i=0;i<18;i+=2)
    { v[place[i]]=1;v[place[i+1]]=2;}
for (w=1;w<=5;w++){
for(i=1;i<=4;i++)
  { f>>pion[4-i+1];s[pion[4-i+1]]=1;}
f>>z;
for (i=1;i<=z;i++)
{
  f>>x;
  ok1=0;
  mini=pion[1];
  num=mini+x;
  steag=0;
  if(s[num]==0)
    {s[mini]=0;
    if(p[num]==0)
      {j=num+1;ok1=1;
      while(s[j]==0&&j<=52&&j-num<=6)
        j++;
      if(j<=52)
        {j--;s[j]=1; pion[1]=j;}
      else
        {s[num]=1; pion[1]=num;}}
    if(int(sqrt(num))==sqrt(num))
      {j=num-1;ok1=1;

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while(s[j]==0&&j>=1&&num-j<=6)
    j--;
if(j>=0)
    {j++;s[j]=1; pion[1]=j;
    }
else
    {s[num]=1;pion[1]=num;}}
if(ok1==0 &&v[mini]!=1){
    c=0;
    for(j=mini;j<=num;j++)
        c=c+v[j];
    if(c>2&&(v[mini]!=2 | v[num]!=1))
        {noup=num;
        while((noup%x!=0 || s[noup]==1)&&noup>mini)
            noup--;
        if (noup==52){steag=1;pion[1]=100;}
        else { s[noup]=1;steag=1;pion[1]=noup;}}
if(ok1==0)
    if(mini>=22&&mini<=25&&num>27)
        caut(num,mini);
if(ok1==0)
    if((mini>31&&mini%5==0&&x==6) || (mini<18&&mini%5==2&&x==6))
        caut(num,mini);
if(ok1==0&&steag==0)
    if(num==52) pion[1]=100;
    else
        {s[num]=1; pion[1]=num;}
    }}
steag=0;
if(pion[1]!=100)
    {g<<pion[1]<<" ";steag=1;}
if(steag==0)
    g<<"GAME OVER";
g<<endl;
for(i=1;i<=52;i++)
    s[i]=0;
}
}

```