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// Intermediate 5, Unirea National College - Romania
// 11 grade
#include <bits/stdc++.h>
using namespace std;
int v[100], nr[9]= {7,12,17,22,27,35,40,45,50};
ifstream fin("in.in");
ofstream fout("output.out");

int mutare(int x,int y)
{
    for(int i=0; i<9; i++)
        if(x<nr[i] and y>nr[i])
            return 1;
    return 0;
}

void minim(int &x, int &y, int &z)
{
    if(y<x)
        swap(x,y);
    if(z<x)
        swap(x,z);
}

int prim(int x)
{
    if(x<2)
        return 0;
    if(x==2)
        return 1;
    if(x%2==0)
        return 0;
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for(int i=3; i*i<=x; i++)
    if(x%i==0)
        return 0;
return 1;
}

int main()
{
    int n,m1,m2,m3,i,j,o,x,y,z,ct,op;
    for(o=1; o<=5; o++)
    {
        for(i=1; i<=3; i++)
        {
            fin>>op;
            v[op]=1;
        }
        fin>>m1>>m2>>m3;
        minim(m1,m2,m3);
        v[m1]=1;
        v[m2]=1;
        v[m3]=1;
        fin>>z;
        for(i=1; i<=z; i++)
        {
            fin>>x;
            if(v[m1+x]!=1)
            {
                if(m1+x<=52)
                {
                    if(prim(m1+x)==1)
                    {

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v[m1]=0;
m1=m1+x;
ct=0;
for(j=m1+1; j<=m1+6; j++)
{
    if(v[j]==0)
        ct++;
    else
        break;
}
m1=m1+ct;
v[m1]=1;
}
else if(sqrt(m1+x)==int(sqrt(m1+x)) and m1+x>4)
{
    v[m1]=0;
    m1=m1+x;
    ct=0;
    for(j=m1-1; j>=m1-6; j--)
    {
        if(v[j]==0)
            ct++;
        else
            break;
    }
    m1=m1-ct;
    v[m1]=1;
}
else if(mutare(m1,m1+x)==1)
{
    ct=0;

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        for(j=m1+1; j<=m1+x; j++)
        {
            if(v[j]==0 and j%x==0)
                ct=j;
        }
        if(ct!=0)
        {
            v[m1]=0;
            m1=ct;
            v[m1]=1;
        }
    }
    else
    {
        v[m1]=0;
        m1=m1+x;
        v[m1]=1;
    }

}

}

minim(m1,m2,m3);

}

if(m2>m3)
    swap(m2,m3);
if(m1<52)
    fout<<m1<<" ";
if(m2<52)
    fout<<m2<<" ";

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if(m3<52)
    fout<<m3<<" ";
fout<<endl;
if(m1=52 and m2==52 and m3==52)
    cout<<"GAME OVER";

for(i=1; i<=52; i++)
    v[i]=0;
}
return 0;
}
```