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import java.io.BufferedReader;
import java.io.InputStreamReader;
import java.net.URL;

public class ACSL_RainaVardhanapu_Contest4_20 {
    public static void main(String[] args)
    {
        String urlString =
"http://www.datafiles.acsl.org/2020/contest4/int-sample-input.txt";

        BufferedReader br;
        try
        {
            URL url = new URL(urlString);
            br = new BufferedReader(new InputStreamReader(url.openStream()));

            String st = new String();

            int linenum = 0;
            while ((st = br.readLine()) !=null)
            {
                linenum++;
                String[] input = st.split(" ");
                String[] markers = new String[53];
                for(int i=1;i<markers.length;i++)
                {
                    markers[i]="-";
                }
                markers[Integer.parseInt(input[0])] = "o";
                markers[Integer.parseInt(input[1])] = "o";
                markers[Integer.parseInt(input[2])] = "o";
                markers[Integer.parseInt(input[3])] = "p";
                markers[Integer.parseInt(input[4])] = "p";
                markers[Integer.parseInt(input[5])] = "p";
                int[] rolls = new int[Integer.parseInt(input[6])];
                for(int j=7;j<input.length;j++)
                {
                    rolls[j-7]=Integer.parseInt(input[j]);
                }
                int low = 0;
                int next = 0;
                int dice = 0;
                int fin = 0;
                for(int k=0;k<rolls.length;k++)
                {
                    for(int l=markers.length-1;l>0;l--)
                    {
                        if(markers[l].equals("p"))

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        {
            low = l;
        }
    }
    dice = rolls[k];
    next = low+dice;
    if(next>=52)
    {
        markers[low] = "-";
    }
    else if(markers[next].equals("-"))
    {
        fin = moves(dice, next, markers);
        markers[low] = "-";
        markers[fin] = "p";
    }
    else
    {
        fin = moves(dice,next+1,markers);
    }
}
String ans = "";
for(int m=1;m<markers.length;m++)
{
    if(markers[m].equals("p"))
    {
        ans=ans+m+" ";
    }
}
System.out.println((linenum)+" "+ans);
}
}
catch (Exception e) {
}
}
public static int moves(int dice, int next, String[] markers)
{
    int fin = 0;
    if(prime(next).equals("prime"))
    {
        fin = next+6;
        for(int i=next+1; i<=next+6; i++)
        {
            if(!markers[i].equals("-"))
            {
                fin = i-1;
                break;
            }
        }
    }
}

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}
else if(next==9||next==16||next==25||next==36||next==49)
{
    fin = next-dice;
    for(int i=next-1; i>=next-6; i--)
    {
        if(!markers[i].equals("-"))
        {
            fin = i+1;
            break;
        }
    }
}
else if(turn(dice,next,markers).equals("turn"))
{
    for(int i=(next-dice); i<=next; i++)
    {
        if(i<52&&i%dice==0&&markers[i]=="-")
        {
            fin = i;
            break;
        }
        else
        {
            fin = next-dice;
        }
    }
}
else
{
    fin = next;
}
return fin;
}
public static String prime(int num)
{
    int count = 0;
    for(int i=2; i<num; i++)
    {
        if(num%i==0)
        {
            count++;
        }
    }
    if(count==0)
    {
        return "prime";
    }
}

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        return "not prime";
    }
    public static String turn (int dice, int next, String[] markers)
    {

        if (dice>=2)
        {
            for(int i=next-dice; i<=next; i++)
            {

if(i+2<=next&&((i==6&&i+1==7&&i+2==8)||i==11&&i+1==12&&i+2==13)||i==16&&i+1==17&&i+
2==18)||i==21&&i+1==22&&i+2==23)||i==26&&i+1==27&&i+2==28)||i==34&&i+1==35&&i+2=
=36)||i==39&&i+1==40&&i+2==41)||i==44&&i+1==45&&i+2==46)||i==49&&i+1==50&&i+2==5
1)))
                {
                    return "turn";
                }
            }
        }
        return "no turn";
    }
}

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