

OLIMPIADA NAȚIONALĂ DE INFORMATICĂ
Etapa județeană
Clasa a – VIII –a
Soluții

Problema 1

```
var f, g:text;
    p,u,nrpopas,ind,j,k,t,m,i,min,r,nr, aux :byte;
    v:array[0..50] of byte; ordo,exista:boolean;

begin
min:=255; exista:=false;
assign( f, 'popas.in');
assign( g, 'popas.out');
reset(f);
rewrite(g);
readln(f,k);
for i:=1 to k do readln(f);
readln(f,t,m);
reset(f);
readln(f);
for i:=1 to k do begin
read(f, nr);{ nr- numarul traseului}
read(f,r);{r- numarul izvoarelor de pe traseu}
for j:=1 to r do read(f,v[j]);
readln(f);
repeat
ordo:=true;
for j:=1 to r-1 do if v[j]>v[j+1] then begin
                                ordo:=false;
                                aux:=v[j];
                                v[j]:=v[j+1];
                                v[j+1]:=aux;
                                end;

until ordo;
v[r+1]:=v[r]+1;
nrpopas:=0;
ordo:=true;
p:=0;u:=1;
repeat
if (t+m<v[u]-v[p]) then ordo:=false
else begin
while (t+m>=v[u]-v[p])and (u<=r+1) do u:=u+1;
if u<=r+1 then begin nrpopas:=nrpopas+1; p:=u-1;end;
end;
until (u>r+1) or (ordo=false);
```

```
if ordo=true then if nrpopas<=min then begin
                                exista:=true;
                                min:=nrpopas;
                                ind:= nr;
                                end;
                                end;

if not exista then write(g, 0)
                  else write(g, min, ' ', ind);
close(g);
end.
```

Problema 2

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
#include<stdlib.h>
int diviz(int n)
{
    int i1;
    for(i1=3;i1<=n/2;i1++)
        {if(n%i1==0){return i1;}}
    if(int(n/3)>1){return 3;}else{return 2;}
}
void main()
{
    int k,a,b,i1,i2,i3,x,y,z;

    // clrscr();
    FILE *f;
    f=fopen("ron.in","rt");
    fscanf(f,"%d",&k);
    fscanf(f,"%d",&a); fscanf(f,"%d",&b);
    fclose(f);
    // printf("k=%d; a=%d; b=%d;",k,a,b);

    x=0;y=0;
    while(x==0)
    {
        if(k>1)
        {

            //printf("\nk=%d;diviz=%d;elements=%d;y=%d;",k,diviz(k),k/diviz(k)
            ),y);
            k/=diviz(k);
            y++;
        }
        else
        {x=1;}
    }
    // printf("\n%d",y);
    f=fopen("ron.out","wt");
    if(((y==a)&&(a==b))||((y!=a)&&(y!=b)))
        {fprintf(f,"O");}
    else
    {
        if(y==a) {fprintf(f,"L");}
        else
            { if(y==b) {fprintf(f,"S");}
            }
    }
    // printf("%d",y );
```

```
    fclose(f);  
    // getch();  
}
```