

Државно такмичење из програмирања
Београд – 20. април 2013 .
I категорија (5. и 6. разред)

Решење:

1.

```
#include <iostream>
using namespace std;
int convert_time(int d,int h,int m)
{
    return ((d-1)*24*60+h*60+m);
}

int main()
{
    int n,cl_time,current_time,current_day,time,d,h,m,i;
    cin>>d>>h>>m;
    current_day=d;
    current_time=convert_time(d,h,m);
    cl_time=100000000;
    cin>>n;
    for(i=1;i<=n;i++)
    {
        cin>>d>>h>>m;
        if(d==0)
        {
            time=convert_time(current_day,h,m);
            if (current_time>time) time=time+24*60;
            if ((time-current_time)<(cl_time-current_time))
                cl_time=time;
        }
        else
        {
            time=convert_time(d,h,m);
            if(current_time>time)time=time+24*7*60;
            if ((time-current_time)<(cl_time-current_time))
                cl_time=time;
        }
    }
    d=(cl_time/(24*60))%7+1;
    h=(cl_time%(24*60))/60;
    m=cl_time%60;
    cout<<d<<' '<<h<<' '<<m<<endl;
    return 0;
}
```

2.

```
#include<iostream>
using namespace std;

int n;
int c,m,r;
int mt=0;
double maxs=0;
int d;
```

```
int main()
```

```

{
    cin >> n;
    for(int i=1;i<=n;i++)
    {
        cin >> c >> m >> r;
        mt = mt + 60*c + m;
        double ms=(double)r/(60*c+m);
        // if(ms==maxs) cout << "***";
        if(ms>maxs) {maxs=ms; d=i;}
    }

    int d0=mt/(24*60);
    mt = mt % (24*60);
    int c0 = mt/60;
    mt = mt%60;

    cout << d0 << " " << c0 << " " << mt << " " << d << endl;

}

```

3.

```

#include<iostream>
#include<string>
using namespace std;

int main()
{
    string a,b;
    int k, n, p, br = 0;
    cin >> k >> a >> b;
    n = a.size();
    for(int i=0; i < n-k+1; i++)
    { p = (9 + b[i] - a[i])%9;
      br += p;
      for(int j=0; j<k; j++)
          a[i+j] = '1' + (a[i+j]-'1'+p)%9;
    }
    if (a == b) cout << br << endl;
    else cout << 0 << endl;
    return 0;
}

```