



26^{ος} ΠΑΝΕΛΛΗΝΙΟΣ ΔΙΑΓΩΝΙΣΜΟΣ ΠΛΗΡΟΦΟΡΙΚΗΣ

ΘΕΜΑ Β΄ ΦΑΣΗΣ ΓΥΜΝΑΣΙΟΥ

Ρυθμική Γυμναστική

C++

3ο Γ/σιο Μυτηλίνης

Δημήτριος Κορνηνός

```
#include <iostream>
#include <fstream>
#include <iomanip>
#include <algorithm>
using namespace std;
float pin[100000];
void readfile();
void printfile();
void prwti_methodos();
void deyeri_methodos();
void createfile();
int k,n,i;
double mo1,mo2,sum;
int main()
{

    readfile();
    sort(pin,pin+n);
    prwti_methodos();
    deyeri_methodos();
    createfile();
    //printfile();

    return 0;
}
////////////////////////////////////
void readfile() {
    int i;
    ifstream infile ("ensemble.in");
    infile>>n>>k;
    for(i=0;i<n;i++)
        infile>>pin[i];

    infile.close();
}
}
```

Σελίδα 1 από 5

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☎ +30-210-3300999, 📠 +30-210-3301893 E-mail: epy@epy.gr, Web: www.epy.gr

37 Χρόνια **ΕΠΥ 1977 - 2014**



```
////////////////////////////////////
void printfile() {

    int i;

    for(i=0;i<n;i++)
        cout<<pin[i]<<endl;

}
////////////////////////////////////
void prwti_methodos() {

    sum=0;
    for(i=0;i<k;i++)
        pin[i]=0;
    for(i=(n-k);i<n;i++)
        pin[i]=0;

    for(i=0;i<n;i++)
        sum=sum+pin[i];

    mo1=sum/(n-k*2);

    //cout<<fixed<<setprecision(2)<<mo1<<endl;
}
////////////////////////////////////
void deyteri_methodos() {

    sum=sum+(pin[k]*k)+(pin[n-k-1]*k);

    mo2=sum/n;
    //cout<<fixed<<setprecision(2)<<mo2<<endl;

}
//+++++
void createfile() {

    ofstream outfile("ensemble.out");
    outfile<<fixed<<setprecision(2)<<mo1<<"
"<<fixed<<setprecision(2)<<mo2<<endl;

}
////////////////////////////////////
```



PASCAL

Ευάγγελος Βιδάλης Πρότυπο Πειραματικό Γυμνάσιο Αγίων Αναργύρων

```
program pdp2b26;
var
infile,outfile:text;
N,K:longint;
scoreb:array[1..101] of longint;
scoreindex,lindex,hindex,i:byte;
score,sum,score1st,score2nd:real;
begin
  assign(infile,'ensemble.in');
  reset(infile);
  readln(infile,N,K);
  for i:=1 to 101 do
    scoreb[i]:=0;
  while not eof(infile) do
  begin
    readln(infile,score);
    scoreindex:=round(score*10)+1;
    scoreb[scoreindex]:=scoreb[scoreindex]+1;
  end;

  lindex:=1;
  while scoreb[lindex]<=K do
  begin
    scoreb[lindex+1]:=scoreb[lindex+1]+scoreb[lindex];
    lindex:=lindex+1;
  end;
  hindex:=101;
  while scoreb[hindex]<=K do
  begin
    scoreb[hindex-1]:=scoreb[hindex-1]+scoreb[hindex];
    hindex:=hindex-1;
  end;
  sum:=0;
  for scoreindex:=lindex to hindex do
    sum:=sum+scoreb[scoreindex]*(scoreindex-1)/10;
  score2nd:=sum/N;
  scoreb[lindex]:=scoreb[lindex]-K;
  scoreb[hindex]:=scoreb[hindex]-K;
  sum:=0;
  for scoreindex:=lindex to hindex do
    sum:=sum+scoreb[scoreindex]*(scoreindex-1)/10;
  score1st:=sum/(N-K-K);
  assign(outfile,'ensemble.out');
```

Σελίδα 3 από 5



```
rewrite(outfile);  
writeln(outfile,score1st:4:2,' ',score2nd:4:2);  
close(infile);  
close(outfile);  
end.
```

C

Απόστολος Τζίνας (80%)

Πρότυπο Πειραματικό Σχολείο Α.Π.Θ.

```
#include <stdio.h>  
#include <stdlib.h>  
# include <math.h>  
  
int main(int argc, char *argv[])  
{  
  int N,K,a,a1,r,r1;  
  FILE* fin;  
  FILE* fout;  
  fin=fopen("ensemble.in","r");  
  fout=fopen("ensemble.out","w");  
  fscanf(fin,"%d",&N);  
  fscanf(fin,"%d",&K);  
  float v[N],v1[N],min[K+1],max[K+1],s,t;  
  s=0;  
  for (a=0;a<N;a++)  
  {  
    fscanf(fin,"%f", & v[a]);  
    s=s+v[a];  
    v1[a]=v[a];  
  }  
  for (a1=0;a1<K+1;a1++)  
  {  
    max[a1]=0.0;  
    min[a1]=10.0;  
    for (a=0;a<N;a++)  
    {  
      if (v[a]<=min[a1])  
      {  
        min[a1]=v[a];  
        r=a;  
      }  
      if (v1[a]>=max[a1])  
      {  
        max[a1]=v1[a];  
        r1=a;  
      }  
    }  
  }  
}
```

Σελίδα 4 από 5



```
        v[r]=10.0;
        v1[r1]=0.0;
    }
    for (a1=0;a1<K;a1++)
    {
        s=s-min[a1];
        s=s-max[a1];
    }
    t=s;
    t=t+(K*max[K]);
    t=t+(K*min[K]);
    s=round((s/(N-(K*2)))*100)/100;
    t=round((t/N)*100)/100;
    fprintf(fout,"%2.2f ",s);
    fprintf(fout,"%2.2f",t);
    fclose(fin);
    fclose(fout);
    system("PAUSE");
    return 0;
}
```