Problem: 10783-odd Sum (UVa) -19'page Submission date:2022-03-23 19:12:10

```
#include <bits/stdc++.h>
using namespace std;
#define nl '\n'
typedef long long int II;
#define For(i, n) for (II i = 0; i < n; i++)
#define rr return 0
inline void solve();
#define fast ios_base::sync_with_stdio(false);cin.tie(0);cout.tie(0);
int main(){
  fast;solve();rr;
}
inline void solve(){
  II t;
  cin>>t;
  For(i,t){
  II a,b,sum=0,p=1;
  cin>>a>>b;
```

```
for(II i=a;i<=b;i++)if(i%2!=0)sum+=i;
cout << "Case " << i+1 << ": " << sum << nl;
}
</pre>
```

Problem: 10696 - f91 (UVa) -19page Submission date:2022-03-18 13:52:09

```
#include <bits/stdc++.h>
using namespace std;

#define nl '\text{'Yn'}

typedef long long int ll;

#define For(i, n) for (ll i = 0; i < n; i++)

inline void solve();

#define fast ios_base::sync_with_stdio(false);cin.tie(0);cout.tie(0);

int main(){
    //fast; solve();
}

void solve(){</pre>
```

```
Il n;
while(cin>>n){
    if(n==0) break;
    if(n<=100)cout<<"f91("<<n<<") = "<<91<<nl;
    if(n>=101)cout<<"f91("<<n<<") = "<<n-10<<nl;
}</pre>
```

Problem: 10699 - Count the factors (UVa) - 20'page

Submission date: 2022-03-17 16:28:54

```
#include <bits/stdc++.h>
using namespace std;

#define nl '\text{'Yn'}

typedef long long int ll;

#define For(i, n) for (ll i = 0; i < n; i++)

inline void solve();

int main(){
    solve();
}</pre>
```

```
Inline void solve(){
  II n;
  while (cin >> n){
    if (n == 0)break;
    cout << n << ":";
    II ans = 0;
    for (II i = 2; i <= sqrt(n); i++){
       if (n \% i == 0)ans++;
       while (n \% i == 0)n = n / i;
    }
     if (n != 1)ans++;
     cout << ans << nl;
  }
}
```

Problem: 12289 – One-two-three (UVa)-20page Submission date:2022-03-23 03:24:26

```
#include <bits/stdc++.h>
using namespace std;
int main(){
```

```
int t;cin>>t;
      while(t--){
      string str; cin >> str;
      int one = 0, two = 0;
    if (str.size() == 5)
      cout << 3 << nl;
    else{
     for (int i = 0; i < str.size(); i++){
        if (str[0] == 'o' || str[i] == 'n' || str[i] == 'e')one++;
        if (str[i] == 't' || str[i] == 'w' || str[i] == 'o')two++;
     }
     if (one > two)cout << 1 << nl;
     else cout << 2 << nl;
  }
}
```

Problem: 10591 - Happy Number (UVa)-21' page Submission date:2022-03-16 12:24:06

#include <bits/stdc++.h>

```
using namespace std;
#define nl '\n'
typedef long long int II;
int main(){
  Il t; cin>>t;
  while(t--){
    II n, m, p = 1; cin >> n;
    m = n;
    set<II> Set;
    while (1){
       Set.insert(m);
       II sum = 0;
       while (m){
         sum += (m % 10) * (m % 10);
          m = m / 10;
    if (sum == 1){
       printf("Case #%d: %d is a Happy number.\u00e4n", t, n);
       t++; break;}
    if (Set.find(sum) != Set.end()){
```

```
printf("Case #%d: %d is an Unhappy number.\u00e4n", t, n);
    t++; break; }
m = sum;}
```

Problem: 10469-To Carry or not to carry (UVa)-21 page. Submission date:2022-03-16 11:42:31

Problem: 10370-Above Average (UVa)-22' page.

Submission date:2022-03-23 17:35:03

```
#include <bits/stdc++.h>
using namespace std;
#define nl '\n'
typedef long long int II;
int main(){
  II n,m;
  double sum, average, avobe, a [1000], count;
  while(scanf("%d",&n)==1){
    for(II i=0;i< n;i++){}
       sum=0;
       scanf("%d",&m);
       for(II j=0;j< m;j++){}
         scanf("%lf",&a[j]);
         sum + = a[j];
       }
    average=(double)(sum/m),count=0;
    for(II j=0;j< m;j++)if(average< a[j])count++;
    avobe=(double)(100*count/m);
    printf("%.3lf%",avobe);
```

```
cout < < "%\forall n";
}
}</pre>
```

Problem: 10346-Peter's Smokes (UVa)-22 page. Submission date:2022-02-22 20:10:14

```
#include <bits/stdc++.h>
using namespace std;

#define nl '\text{'Y}n'

typedef long long int ll;

int main(){
    ll n,k;
    ll ans,r,d;
    while(scanf("%lld%lld",&n,&k)==2){
        ans=n;
        for(;n>=k;){
        d=n/k;
        r=n%k;
    }
}
```

```
ans=ans+d;
n=d+r;
}
cout<<ans<<endl;
}</pre>
```

Problem: 10327-Flip Sort (Uva)-24' page. Submission date:2022-02-21 16:09:35

```
#include <bits/stdc++.h>
using namespace std;

#define nl '\text{'Yn'}

typedef long long int ll;

int main(){
    int n,arr[1000];
    while(scanf("%d",&n)==1){
        for(int i = 0;i<n;++i)cin>>arr[i];
        Il cunt= 0;
        for(int i = 1;i<n;++i)</pre>
```

```
for(int j = 0;j<i;++j)
    if(arr[j]>arr[i])cunt++;

cout<<"Minimum exchange operations : "<<cunt<<nl;
}
</pre>
```

Problem: 10235-Simply Emirp (Uva)-24 page. Submission date:2022-02-20 09:59:46

```
#include <bits/stdc++.h>
using namespace std;

#define nl '\text{'Yn'}

typedef long long int ll;

bool prime(ll n){
   if(n<2) return false;
   for(ll i=2; i*i<=n; i++)
        if(n%i==0) return false;
   return true;
}</pre>
```

```
II rev(II n){
  II b=0;
  while(n!=0){
        b = b*10 + n%10;
        n/=10;
     }
     return b;
}
int main(){
  II n;
  while(cin>>n){
     if(prime(n)==false) cout<<n<<" is not prime.\u00e4n";</pre>
     else{
        if(prime(rev(n))==true && rev(n)!=n) cout<<n<<" is emirp.\u00e4n";</pre>
        else cout < < n < < " is prime. ¥n";
     }
  }
}
```

Problem: 10222-Decode the mad man (UVa)-25' page. Submission date:2022-02-18 12:08:27

```
#include <bits/stdc++.h>
using namespace std;
#define nl '\n'
typedef long long int II;
int main()
{
  string str;
  char aa[47] = {'q', 'w', 'e', 'r', 't', 'y', 'u', 'i', 'o', 'p', 91, 93, 92,
              'a', 's', 'd', 'f', 'g', 'h', 'j', 'k', 'l', 59, 39,
              'z', 'x', 'c', 'v', 'b', 'n', 'm', 44, 46, 47,
              '`', '1', '2', '3', '4', '5', '6', '7', '8', '9', '0', 45, 61};
  while (getline(cin, str)){
     Il len = str.size();
     for (int i = 0; i < len; i++){
        if (str[i] >= 65 \&\& str[i] <= 90)
           str[i] = tolower(str[i]);
     }
```

```
for (int i = 0; i < len; i++){
        if (str[i] == ' ' || str[i] == '\forall n')
           cout << str[i];
        else{
           for (int j = 1; j < 47; j++){
              if (str[i] == aa[j]){
                 cout << aa[j - 2];
                 break;
              }
           }
        }
     }
     cout << nl;
  }
}
```

Problem: 10082-WERTYU (UVa)-25 page. Submission date:2022-02-17 12:59:00

#include <bits/stdc++.h>

```
using namespace std;
#define nl '\n'
typedef long long int II;
char solve(char c){
  switch (c){
  case '1':
     return '`';
  case '2':
     return '1';
  case '3':
     return '2';
  case '4':
     return '3';
  case '5':
     return '4';
  case '6':
     return '5';
  case '7':
     return '6';
```

```
case '8':
  return '7';
case '9':
  return '8';
case '0':
  return '9';
case '-':
  return '0';
case '=':
  return '-';
case 'W':
  return 'Q';
case 'E':
  return 'W';
case 'R':
  return 'E';
case 'T':
  return 'R';
case 'Y':
```

```
return 'T';
case 'U':
  return 'Y';
case 'I':
  return 'U';
case 'O':
  return 'I';
case 'P':
  return 'O';
case '[':
  return 'P';
case ']':
  return '[';
case '¥¥':
  return ']';
case 'S':
  return 'A';
case 'D':
  return 'S';
```

```
case 'F':
  return 'D';
case 'G':
  return 'F';
case 'H':
  return 'G';
case 'J':
  return 'H';
case 'K':
  return 'J';
case 'L':
  return 'K';
case ';':
  return 'L';
case '¥":
  return ';';
case 'X':
  return 'Z';
case 'C':
```

```
return 'X';
case 'V':
  return 'C';
case 'B':
  return 'V';
case 'N':
  return 'B';
case 'M':
  return 'N';
case ',':
  return 'M';
case '.':
  return ',';
case '/':
  return '.';
case ' ':
  return ' ';
case '¥n':
  return '¥n';
```

```
}
  return ' ';
}
int main(){
  char c;
  while (scanf("%c", &c) != EOF){
    printf("%c", solve(c));
  }
}
```

Problem: 100-The 3n+1 Problem (UVa)-26' page. Submission date:2022-03-22 16:58:01

```
#include <bits/stdc++.h>
using namespace std;

#define nl '\forall n'

typedef long long int ll;

int main(){
   int n,m,j,cunt,ans;
   while(scanf("%d %d", &n, &m)!=EOF){
```

```
ans=0;
     cout<<n<<" "<<m<<" ";
     if(n>m) swap(n,m);
     for(int i=n; i < m; i++){
       cunt=1,j=i;
       while(j > 1){
          if(j \% 2==0)j = j/2;
          else j = (3*j)+1;
          cunt++;
       }
       if(cunt>=ans) ans=cunt;
    }
    cout < < ans < < nl;
  }
}
```

Problem: 12578-10:6:2 (UVa)-26 page. Submission date:2022-04-12 17:38:32

#include <stdio.h>

```
int main(){
  int t;
  scanf("%d", &t);
  while (t--){
    int l;
    scanf("%d", &l);
    double red = (3.14159265358979323846264 * I * l) / 25.0;
    double green = ((6 * I * l) / 10.0) - red;
    printf("%0.2lf %0.2lf¥n", red, green);
}
```

Problem: 10071-Back to High School Physics (UVa)-27' page.

Submission date: 2022-02-17 12:42:40

```
#include <bits/stdc++.h>
using namespace std;

#define nl '\forall n'

typedef long long int ll;
int main(){
```

```
Il v, t;
while (cin >> v >> t){
    cout << 2 * v * t << nl;
}</pre>
```

Problem: 10038-Jolly Jumpers (UVa)-27 page. Submission date:2022-02-17 11:06:25

```
#include <bits/stdc++.h>
using namespace std;

#define nl '\text{'Yn'}

typedef long long int ll;

int main(){
    int n, arr[3001];
    while(cin>>n) {
        for(int i = 0; i < n; i++)cin>>arr[i];
        int m[3001] = {0}, p = 0;
        for(int i = 1; i < n; i++) {
            if(abs(arr[i] - arr[i-1]) < n)</pre>
```

```
m[abs(arr[i] - arr[i-1])]++;
}
for(int i = 1; i < n; i++)
    if(m[i] == 0) p = 1;
    if(p!=0)cout < < "Not jolly Yn";
    else cout < < "Jolly Yn";
}</pre>
```

Problem: 10035-Primary Arithmetic (Uva)-28' page. Submission date:2022-02-16 17:22:18

```
return 0;
     II sum = 0, cunt = 0;
     while (a != 0 || b != 0){}
        sum = (a \% 10 + b \% 10 + sum) / 10;
       a = a / 10;
        b = b / 10;
        if (sum != 0)
          cunt++;
     }
     if (cunt == 0) cout << "No carry operation.\u00e4n";
     else if (cunt == 1) cout << cunt << " carry operation.\u00e4n";
     else cout << cunt << " carry operations.\u00e4n";
  }
}
```

Problem: 913-Joana and the odd Numbers (UVa)-28 page.

Submission date: 2022-02-16 09:07:11

```
#include <bits/stdc++.h>
```

Problem: 900-Brick wall patterns (UVa)-29' page. Submission date:2022-02-15 17:11:04

```
#include <bits/stdc++.h>
using namespace std;
#define nl '\u00e4n'
typedef long long int ll;
```

```
int main(){
    Il cunt[51];
    cunt[0] = 1;
    cunt[1] = 2;
    for (int i = 2; i < 50; i++)
        cunt[i] = cunt[i - 1] + cunt[i - 2];
    Il n;
    while (cin >> n && n != 0)
        cout << cunt[n - 1] << '\footnote{'\footnote{'}}';
}</pre>
```

Problem: 729-The Hamming Distance Problem (UVa)-29 page. Submission date:2022-02-15 09:27:06

```
cin>>t;
  while(t--){
    Il n,one;
    cin>>n>>one;
    Il arr[n];
    for(int i=0; i< n-one; i++)arr[i]=0;
    for(int i=n-one; i< n; i++)arr[i]=1;
    do{
      for(int i=0; i<n; i++)cout<<arr[i];</pre>
      cout<<nl;
    }
    while(next_permutation(arr, arr+n));
    if(t > 0)cout < < nl;
  }
}
Problem: 579-Clock Hands (UVa)-30' page.
Submission date: 2022-02-13 16:05:18
#include <bits/stdc++.h>
using namespace std;
```

```
#define nl '\n'
typedef long long int II;
int main(){
  II h,m;
  while(cin>>h && h!=0){
    char c;
    cin>>c;
    cin>>m;
    h=h*60;
    m=m*11;
    double ans=abs(h-m);
    ans=ans/2;
    if(ans>180)ans=360-ans;
    cout<<fixed<<setprecision(3)<<ans<<nl;</pre>
  }
}
```

Problem: 575-Skew Binary (UVa)-30 page. Submission date:2022-02-12 15:35:30

```
#include <bits/stdc++.h>
using namespace std;
#define nl '\n'
typedef long long int II;
int main(){
  string str;
  while(cin>>str && str!="0"){
     II len=str.size();
     II b=1,ans=0;
     for(II i=len-1;i>=0;i--){
       ans=ans+(str[i]-'0')*(pow(2,b)-1);
       b++;
     }
     cout < < ans < < nl;
  }
}
```

Problem: 541-Erorr Correction (UVa)-31' page. Submission date:2022-02-11 16:55:09

```
#include <bits/stdc++.h>
using namespace std;
#define nl '\n'
typedef long long int II;
int main(){
  II n;
  while (1){
     cin >> n;
     if (n == 0) return 0;
     II max[n][n];
     for (II i = 0; i < n; i++)
       for (II j = 0; j < n; j++)
          cin >> max[i][j];
     II sum = 0, r = 0, c = 0;
     Il row, col;
     for (II i = 0; i < n; i++){
       sum = 0;
       for (II j = 0; j < n; j++)sum += max[i][j];
       if (sum % 2 != 0){
```

```
r++;
          row = i;
       }
     }
     for (II j = 0; j < n; j++){}
       sum = 0;
       for (II i = 0; i < n; i++)
          sum += max[i][j];
       if (sum % 2 != 0){
          C++;
          col = j;
       }
     }
     if (r == 0 \&\& c == 0)
        cout << "OK" << endl;
     if (r == 1 \&\& c == 1)
         cout << "Change bit (" << row + 1 << "," << col + 1 << ")" <<
nl;
     if (r > 1 || c > 1)
```

```
cout << "Corrupt" << nl;
}
</pre>
```

Problem: 490-Rotating Sentences (UVa)-31 page. Submission date:2022-02-10 15:38:06

```
#include <bits/stdc++.h>
using namespace std;
#define nl '\n'
typedef long long int II;
int main(){
  string str[105];
  II p = 0, k = 0;
  while (getline(cin, str[p])){
     if (str[p].size() > k) k = str[p].size();
     p++;
  }
  for (int j = 0; j < k; j++){
     for (int i = p - 1; i > = 0; i--){
```

```
if (str[i].size() > j) cout << str[i][j];
    else cout << ' ';
}
    cout << nl;
}</pre>
```

Problem: 488-Triangle Wave (UVa)-32' page. Submission date:2022-02-09 8:39:13

```
for (int j = 1; j <= a; j++) {
           for (int k = 0; k < j; k++)cout<<j;
           cout<<nl;
        }
        for (int j = a - 1; j > = 1; j - -) {
           for (int k = 0; k < j; k++)cout < j;
           cout<<nl;
        }
        if (i != f - 1)cout << nl;
     }
     if(t)cout<<nl;</pre>
  }
}
```

Problem: 458-The Decoder (UVa)-32 page. Submission date:2022-02-08 08:48:51

```
#include < stdio.h >
int main(){
  char s[1000];
```

```
int i;
while(gets(s)) {
  for(i = 0; s[i]; i++)printf("%c", s[i]-7);
  puts("");
  }
  return 0;
}
```

Problem: 446- Kibbles "n" Bits "n" Bits "n" Bits (UVa)-33' page. Submission date:2022-02-08 07:19:15

```
#include <bits/stdc++.h>
using namespace std;

#define nl '\forall n'

typedef long long int ll;

int main(){

    Il t, hex1, hex2, ans;

    char c;

    cin >> t;
```

```
while (t--){
    cin >>hex1 >> c >> hex2;
    if (c == '+') ans = hex1 + hex2;
    else ans = hex1 - hex2;
    cout << bitset<13>(hex1) << " " << c << " " << bitset<13>(hex2)
    << " = " << ans << nl;
    }
}</pre>
```

Problem: 440-Eeny Meeny Moo (UVa)-33 page. Submission date:2022-02-06 07:21:15

```
}
int main(){
  II n;
  while(cin>>n){
    if(n==0)return 0;
    for(int i=1;;i++){
      if(abc(n,i)==0){
        cout<<i<<nl;
        break;
      }
    }
  }
}
Problem: 401-Palindromes (UVa)-34' page.
Submission date: 2022-02-03 11:23:39
#include <bits/stdc++.h>
using namespace std;
```

#define nl '\n'

typedef long long int II;

```
int main(){
  string s="ABCDEFGHIJKLMNOPQRSTUVWXYZ123456789";
  string c="A 3 HIL JM O 2TUVWXY51SE Z 8";
  map<char,char>mp;
  for(int i=0; i < s.size(); i++)
    mp[s[i]]=c[i];
  string str;
  while(cin>>str){
    string b="";
    string rev = string(str.rbegin(),str.rend());
    for(int i=0;i<rev.size();i++)b=b+mp[rev[i]];</pre>
    if(b==str && rev==str)
       cout<<str<<" -- is a mirrored palindrome."<<nl<<nl;
    else if(b==str)
       cout<<str<<" -- is a mirrored string."<<nl<<nl;
    else if(rev==str)
       cout<<str<<" -- is a regular palindrome."<<nl;
    else cout < < str < < " -- is not a palindrome." < < nl < < nl;
  }
```

Problem: 146-ID Codes (UVa)-34 page. Submission date:2022-02-02 17:29:12

```
#include <bits/stdc++.h>
using namespace std;
#define nl '\n'
typedef long long int II;
int main(){
  string str;
  while(cin>>str){
    if(str=="#")return 0;
     Il len=str.size();
    if(next_permutation(str.begin(),str.end()))
          cout<<str<<nl;
    else cout < < "No Successor¥n";
  }
}
```

Problem: 136-Ugly Number (UVa)-35' page. Submission date:2022-02-02 17:09:47

```
#include <bits/stdc++.h>
using namespace std;

#define nl '\forall n'
int main(){
   cout < < "The 1500'th ugly number is 859963392.\forall n";
}</pre>
```

Problem: 119-Greedy Gift Givers (UVa)-35 page. Submission date:2022-02-02 10:34:10

```
#include <bits/stdc++.h>
using namespace std;

#define nl '\text{'Yn'}

typedef long long int ll;

#define pb(x) push_back(x)

int main(){

    Il n, money, a;

    string name, frnd;

    vector<string> vec;
```

```
II cunt = 0;
while (cin >> n){
  vec.clear();
  map<string, II> mp;
  for (II i = 0; i < n; i++){
     cin >> name;
     mp[name] = 0;
    vec.pb(name);
  }
  for (II i = 0; i < n; i++){
     cin >> name >> money >> a;
     if (a > 0){
       mp[name] = mp[name] + money % a;
       mp[name] = mp[name] - money;
       for (II j = 0; j < a; j++){}
         cin >> frnd;
         mp[frnd] = mp[frnd] + money / a;
       }
    }
```

```
if (cunt > 0) cout << endl;

for (int i = 0; i < vec.size(); i++)

    cout << vec[i] << " " << mp[vec[i]] <<nl;

cunt++;
}
</pre>
```

Problem: 113-Power of Cryptography (UVa)-36' page. Submission date:2022-01-31 14:03:10

```
#include <bits/stdc++.h>
using namespace std;
#include<stdio.h>
int main(){
  double a,b;
  while(cin>>a>>b){
    double c=pow(b,(1/a));
    printf("%0.0lf\u00e4n",c);
}
```

Problem: 10110-Light, more-Light (UVa)-36 page. Submission date:2022-04-14 16:11:21

```
#include <bits/stdc++.h>
using namespace std;

#define nl '\forall n'

typedef long long int ll;

int main(){

    Il n = 1;
    while (cin >> n && n != 0){

        Il sq = sqrt(n);
        cout << (sq * sq == n ? "yes\forall n" : "no\forall n");
    }
}</pre>
```

Problem: 10420-List of Conquests (UVa)-37' page. Submission date:2022-01-22 06:25:30

```
#include <bits/stdc++.h>
using namespace std;
```

```
#define nl '\n'
typedef long long int II;
int main(){
  II n;
  cin>>n;
  string str[n];
  for(int i=0;i< n;i++){
     cin>>str[i];
     string name;
     getline(cin,name);
  }
  sort(str,str+n);
  II cunt=1;
  for(int i=0;i<n;i++){
     if(str[i]!=str[i+1]){
       cout<<str[i]<<" "<<cunt<<nl;
       cunt=1;
       continue;
     }
```

```
cunt++;
}
```

Problem: 494-Kindergartent Counting Game (UVa)-37 page.

Submission date:2022-01-27 06:00:08

```
#include <bits/stdc++.h>
using namespace std;
#define nl '\n'
typedef long long int II;
int main(){
  II cunt=0;
  string str;
  while(getline(cin,str)){
     for(int i=0;i<str.size();i++)</pre>
       if(isalpha(str[i]) && !isalpha(str[i+1]))cunt++;
     cout<<cunt<<nl;
     cunt=0;
  }
```

Problem: 272-Tex Quotes (UVa)-38 page. Submission date: 2022-01-26 14:08:41

```
#include <bits/stdc++.h>
using namespace std;
#define nl '\n'
typedef long long int II;
int main(){
  char ch;
  II cunt = 0;
  while(scanf("%c",&ch) == 1){
    if(ch == '"'){
       cunt++;
       if(cunt%2!=0)cout<<"`";
       else cout<<""";
    }
    else printf("%c",ch);
  }
```

Problem: 11498-Division of Nlogonia (UVa)-38 page. Submission date:2022-01-26 13:48:04

```
#include <bits/stdc++.h>
using namespace std;
#define nl '\n'
typedef long long int II;
int main(){
  II t;
  while(cin>>t && t!=0){
    Il a,b;
    cin>>a>>b;
    while(t--){
       II x,y;
       cin>>x>>y;
       if(x==a||y==b)cout<<"divisa"<<nl;
       else if(x>a && y>b)cout<<"NE"<<nl;
       else if(x<a && y>b)cout<<"NO"<<nl;
```

```
else if(x<a && y<b)cout<<"SO"<<nl;
else if(x>a && y<b)cout<<"SE"<<nl;
}
}</pre>
```