

Worksheet 3

Domain Winter Winning Camp

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Section: DWWC - 43

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Subject Name: IT Skills

1. Chef and lock out draws


Code:

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

int main() {
    // your code goes here
    int t;
    cin>>t;
    while(t--){
        int a,b,c;
        cin>>a>>b>>c;
        if(a+b == c){
            cout<<"YES\n";
        }
        else if(b+c == a ){
            cout<<"YES\n";
        }
        else if(c+a == b){
            cout<<"YES\n";
        }
        else{
            cout<<"NO\n";
        }
    }
    return 0;
}
```

}

Output:

Status:  Correct Answer		Submission ID: 84936097
Time: 0.01s		
Sub-Task	Task #	Result (time)
1	0	AC (0.003553)
1	1	AC (0.005803)
1	2	AC (0.005937)
Subtask Score: 100.00%		Result - AC

2. Turbo sort

Code:

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

```
using namespace std;
```

```
int main() {  
    // your code goes here  
    int t;  
    cin>>t;  
    vector <int> a(t);  
    for(int i = 0; i< t ; i++){  
        cin>>a[i];  
    }
```

```

    }
    sort(a.begin(),a.end());
    for(int x : a)
        cout<<x<<endl;
    return 0;
}

```

Output:

Status: ✓ Correct Answer
Submission ID: [84938038](#)

Time:
1.57s

3. Chef and sorting

Code:

```

#include <bits/stdc++.h>
using namespace std;
typedef long long ll;
#define maxN 1010
#define maxK 60
#define mod 1000000007
int a[maxN];
int main(){
    int tc, n, i, j, k, l = (1 << 30) - 1;
    scanf("%d", &tc);
    while (tc--) {
        scanf("%d", &n);
        for (i = 0; i < n; i++) {
            scanf("%d", &a[i]);
        }
    }
}

```

```

j = 0, k = 1;
for (i = 1; i < n; i++) {
    if (a[i - 1] < a[i]) {
        k++;
    }
    else if (a[i - 1] > a[i]) {
        j++;
    }
}
printf("%d\n", min(j, k));
if (k < j) {
    printf("%d %d %d\n", 3, n, 1);
    for (i = 0; i < n; i++) {
        a[i] ^= 1;
    }
}
for (i = 1; i < n; i++) {
    if (a[i - 1] > a[i]) {
        printf("%d %d %d\n", 2, i + 1, a[i - 1] - a[i]);
    }
}
}
return 0;
}

```

Output:

Status:  Correct Answer

Submission ID: [84940015](#)

Time:
0.10s


4. Flip sorting

Code:

```
#include <bits/stdc++.h>
using namespace std;
#define ll long long int
int main()
{
    ll t;
    cin>>t;
    while(t--)
    {
        int n;
        cin>>n;
        string s;
        cin>>s;
        ll count=0;
        vector<int> v;
        for(int i=1;i<n;i++){
            if(s[i]!=s[i-1])
            { ++count;
              v.push_back(i);
            }
        }

        cout<<count<<endl;
        for(int i=0;i<v.size();i++){
            cout<<"1"<<" "<<v[i]<<endl;
        }
    }
    return 0;
}
```

Output:

Status:  Correct Answer

Submission ID: [84940157](#)

Time:

0.08s

Sub-Task	Task #	Result (time)
1	0	AC (0.003940)
1	1	AC (0.004117)
1	2	AC (0.007614)
1	3	AC (0.007785)
1	4	AC (0.043254)
1	5	AC (0.043290)
1	6	AC (0.075875)

5. Frog sort

Code:

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

```
#define fi first
```

```
#define se second
```

```
using namespace std;
```

```
typedef pair<int, int> ii;
```

```
typedef pair<int, ii> iii;
```

```
iii a[100011];
```

```
int n;
```

```
int main()
```

```
{
```

```
    int t;
```

```
    cin>>t;
```

```
    while(t--)
```

```
    {
```

```
        cin>>n;
```

```
        for(int i=1;i<=n;i++) a[i].se.se=i;
```

```
        for(int i=1;i<=n;i++) cin>>a[i].fi;
```

```
        for(int i=1;i<=n;i++) cin>>a[i].se.fi;
```

```
        sort(a+1,a+n+1);
```

```
        int ans=0;
```

```
        for(int i=2;i<=n;i++)
```

```
        {
```

```
            while(a[i].se.se<=a[i-1].se.se)
```

```
            {
```

```
                ans++;
```

```
                a[i].se.se+=a[i].se.fi;
```

```
            }
```


```
        }
```

```

        cout<<ans<<endl;
    }
    return 0;
}

```

Output:

Status:  Correct Answer		Submission ID: 84940385
Time: 0.04s		
Sub-Task	Task #	Result (time)
1	0	AC (0.003895)
Subtask Score: 50.00%		Result - AC
2	1	AC (0.042954)
Subtask Score: 50.00%		Result - AC
Total Score = 100.00%		

6. Chef and employment test

Code:

```

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

int main()
{
    int t;
    cin>>t;
    while(t--)
    {

```



```

int n,k;
cin>>n>>k;
int arr[n];


for(int i=0;i<n;i++)
{
    cin>>arr[i];
}

sort(arr,arr+n);
cout<<arr[(n+k)/2]<<endl;
}

return 0;
}

```

Output:

Status:  Correct Answer		Submission ID: 84940893
Time: 0.00s		

7. Chef and patients

Code:

```

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

void solve()
{
    int n;
    cin >> n;
}

```

```
vector<pair<int, int>> a(n);  
int mx = 0;
```

```
for (int i = 0; i < n; i++)  
{  
    a[i].second = i;  
    cin >> a[i].first;  
    mx = max(mx, a[i].first);  
}
```

```
for (int i = 0; i < n; i++)  
    a[i].first = mx - a[i].first;
```


```
sort(a.begin(), a.end());  
vector<int> ans(n);
```

```
for (int i = 0; i < n; i++)  
    ans[a[i].second] = i + 1;
```

```
for (int& e : ans)  
    cout << e << " ";  
cout << endl;  
}
```

```
int main()  
{  
    int t;  
    cin >> t;  
    while (t--)  
        solve();  
    return 0;  
}
```

Output:

Status:  Correct Answer		Submission ID: 84941042
Time: 0.15s		
Sub-Task	Task #	Result (time)
1	0	AC (0.148691)
Subtask Score: 100.00%		Result - AC

8. Candies

Code:

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

int main() {
    int test;
    cin>>test;
    while(test--){
        int n;
        cin>>n;
        int arr[n];
        int min=INT_MAX;
        int max=INT_MIN;
        for(int i=0;i<n;i++){
            cin>>arr[i];
            if(arr[i]>max)max=arr[i];
            if(arr[i]<min)min=arr[i];
        }
    }
}
```


```

    }
    int check=max-min;
    int i;
    for(i=0;i<n;i++){
        if(arr[i]==check){
            cout<<check<<endl;
            break;
        }
    }
    if(i==n)cout<<"NO"<<endl;
}

return 0;
}

```

Output:

Status:  Correct Answer	Submission ID: 84941169
Time: 0.00s	

9. Chef and party

Code:

```

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

int main() {
    int t;
    cin>>t;
    while(t--){
        int n, count=0;

```

```
        cin>>n;
int a[n];
for(int i=0; i<n; i++) cin>>a[i];
sort(a,a+n);
for(int i=0; i<n; i++){
    if(a[i]<=i) count++;
    else break;
}
cout<<count<<endl;
}
return 0;
}
```

Output:

Status:  Correct Answer

Submission ID: [84941394](#)

Time:

0.17s