STL - priority_queue

```
priority_queue<int> q;

q.push(1);
q.push(2);
q.push(3);
q.push(4);
cout << q.top() << endl;
q.pop();
cout << q.size() << endl;

while(!q.empty())
    q.pop();
```

STL - priority_queue

```
priority_queue<string> q;

q.push("A");
q.push("Aa");
q.push("a");
q.push("3");
while(!q.empty()){
    cout << q.top() << endl;
    q.pop();
}
```

STL - set

```
set<int> s;

s.insert(7);
s.insert(5);
s.insert(3);
s.insert(5);
s.insert(9);
s.insert(9);

cout << *s.begin() << endl;
cout << *++s.begin() << endl;
cout << *--s.end() << endl;

cout << s.size() << endl;
s.clear();

for (int i = 1; i<=10; ++i)
    s.insert(i);
set<int>::iterator it = s.begin();
for (int i = 0; i<5; ++i)
    ++it;
s.erase(it);
s.erase(6);
s.erase(7);
```

STL - set

```
set<int> s;

s.insert(7);
s.insert(5);
s.insert(3);
s.insert(5);
s.insert(9);
s.insert(9);

if (s.find(11) == s.end())
    cout << "NO" << endl;
else
    cout << "YES" << endl;

cout << *s.lower_bound(4) << endl;
cout << *s.upper_bound(5) << endl;
// cout << *s.upper_bound(9) << endl;
```

STL - map

```
map<string, int> mp;

mp["Ahmed"] = 15;
++mp["Montaser"];
mp.insert(make_pair("Samer", 17));

if (mp.find("ahmed") == mp.end())
    cout << "NO" << endl;
else
    cout << "YES" << endl;

map<int, int> frequency;
int z = 1000000157;
++frequency[z];
```

Problem #1

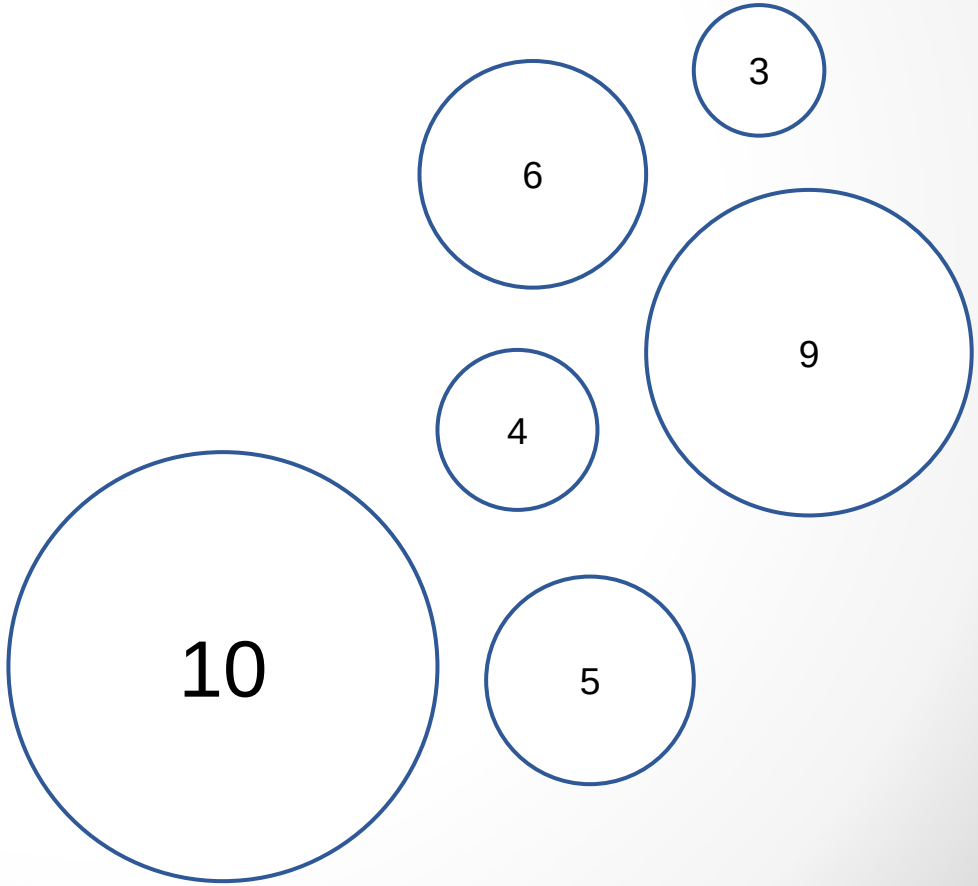
http://codeforces.com/contest/140/problem/C

Input

```
6
3 6 9 4 5 10
```

Output

```
2
3 6 9
4 5 10
```



Problem #1

```
int n;
cin >> n;
map<int, int> freq;
for (int i = 0, x; i<n; ++i){
    cin >> x;
    ++freq[x];
}
priority_queue<pair<int,int> > q;
for (map<int, int>::iterator it = freq.begin(); it != freq.end(); ++it)
    q.push(make_pair(it->second, it->first));
```

Problem #1

```
vector<vector<int> > sol;
while (q.size() >= 3){
    vector<pair<int, int> > tmp;
    for (int i = 0; i<3; ++i){
        tmp.push_back(q.top());
        q.pop();
    }
    sol.push_back(vector<int>());
    for(int i=0;i<3;++i){
        sol.back().push_back(tmp[i].second);
        --tmp[i].first;
        if (tmp[i].first>0)
            q.push(tmp[i]);
    }
}
```

Problem #1

```
printf("%d\n",sol.size());
for (int i = 0; i<sol.size(); ++i){
    sort(sol[i].begin(), sol[i].end());
    reverse(sol[i].begin(), sol[i].end());
    for (int j = 0; j<3; ++j)
        printf("%d ", sol[i][j]);
    printf("\n");
}
```

More Problems

http://a2oj.com/p.jsp?ID=327
http://codeforces.com/problemset/problem/26/B
http://www.spoj.com/problems/ANARC09A/
http://codeforces.com/contest/218/problem/B
http://www.spoj.com/problems/RMID/
https://uva.onlinejudge.org/index.php?option=onlinejudge&page=show_problem&problem=3146
http://codeforces.com/contest/528/problem/A
http://acm.tju.edu.cn/toj/showp2175.html