ninjassolutions.s3.amazonaws.com/0000000000000570.zip

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

bool check(int cows,long long positions[],int n,long long distance){

 int count = 1;
 long long last_position = positions[0];

 for(int i=1;i<n;i++){
  if(positions[i] - last_position >= distance){
   last_position = positions[i];
   count++;
  }

  if(count == cows){
   return true;
  }
 }
 return false;
}

int main(){
 int t;
 cin >> t;
 while(t--){
  int n,c;
  cin >> n >> c;

  long long positions[n];
  for(int i=0;i<n;i++){
   cin >> positions[i];
  }
  sort(positions,positions+n);
  long long start = 0;
  long long end = positions[n-1] - positions[0];

  long long ans = -1;

  while(start<=end){
   long long mid = start + (end-start)/2;

   if(check(c,positions,n,mid)){
    ans = mid;
    start = mid+1;
   }else{
    end = mid-1;
   }
```

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  }
  cout << ans <<endl;
 }

 return 0;
}
```