

Day 89 coding Statement:

Solution:

```
import java.util.*;
import java.lang.*;
import java.io.*;
class Day89{
    public static void main(String[] args){
        Scanner sc=new Scanner(System.in);
        PrintWriter pw=new PrintWriter(System.out);
        int t=sc.nextInt();
        sc.nextLine();
        while(t-->0){
            int n=sc.nextInt();
            int k=sc.nextInt();
            long c=sc.nextInt();
            long a[]=new long[n];
            for(int i=0;i<n;i++)a[i]=sc.nextLong();
            Arrays.sort(a);
            int min=0;
            int max=n/k;
            int ans=0;
            while(min<=max){
                int mid=min+(max-min)/2;
                if(check(a,mid,k,c)){
                    ans=mid;
                    min=mid+1;
                }
            }
        }
    }
}
```

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        else
            max=mid-1;
    }
    pw.println(ans);
}
pw.close();
}

static boolean check(long[] a,int x,int k,long c)
{
    if(k*x>a.length) return false;
    if(x==0) return true;
    long v[][]=new long[k][x];
    for(int i=0;i<x;i++) v[0][i]=a[i];
    int s=x;
    for(int i=1;i<k;i++){
        for(int j=0;j<x;j++){
            boolean flag=false;
            while(s<a.length){
                if(a[s]>=c*v[i-1][j]){
                    v[i][j]=a[s];
                    s++; flag=true;
                    break;
                }
                s++;
            }
            if(!flag) return false;
        }
    }
}

```

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    }  
    return true;  
  }  
}
```