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ECE - D

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ProblemStatement:

GivenanarrayAofsortedintegersandanothernonnegativeintegerk,findif there exists2indicesiandjsuchthatA[i]-A[j]=k,i!=j.

InputFormat

- 1. FirstlineisnumberoftestcasesT.FollowingTlinescontain:
- 2. N,followedbyNintegersofthearray
- 3. Thenon-negativeintegerk

Outputformat

Print1ifsuchapairexistsand0ifitdoesn't.

SampleInput:

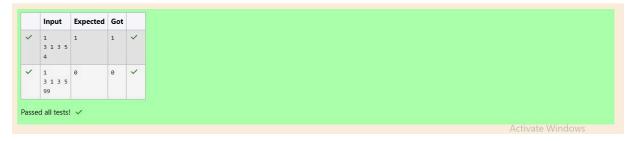
1

3135

4

SampleOutput:

1



ProblemStatement:

Samloveschocolatesandstartsbuyingthemonthe1stdayoftheyear.Each day of the

year,x,isnumberedfrom1toY.Ondayswhenxisodd,Samwillbuyx chocolates;on dayswhenxiseven,Samwillnotpurchaseanychocolates.

Complete the code in the editors othat for each day Ni (where $1 \le x \le N \le Y$) in array arr, the number of chocolates Sampurchased (during days 1 through N) is printed on a

newline. This is a function-only challenge, so input is handled for you by the locked stub

codeintheeditor.

InputFormat

The program takes an array of integers as a parameter.

The locked code in the editor handles reading the following input from stdin, assembling

itintoanarrayofintegers(arr),andcallingcalculate(arr).

Thefirstlineofinputcontainsaninteger,T(thenumberoftestcases).Each line i of

the Tsubsequent lines describes the ith test case as an integer, Ni (the number of days).

Constraints

1≤T≤2×105

1≤N≤2×106

 $1 \le x \le N \le Y$

OutputFormat

Foreachtestcase, Tiinarr, your calculatemethods hould print the total number of chocolates Sampurchased by day Nionanew line.

Sample Input 0

3

1

2

3

SampleOutput0

1

1

4

```
Answer: (penalty regime: 0 %)
   1 #include <stdio.h>
            int t:
            while(t--){
                 int n,c=0;
int n,c=0;
scanf("%d",&n);
for(int i=0;i<=n;i++){
    if(i%2!=0){</pre>
                     c+=i;
}
   10
   11
   12
                      printf("%d\n",c);
   14
   16
        Input Expected Got
              1296
                            1296 🗸
               2500
                            2500
               1849
               729
                            729
```

ProblemStatement:

1521

2401

77

13

98
Passed all tests! ✓

Thenumberofgoalsachievedbytwofootballteamsinmatchesinaleagueis given in the

formoftwolists.Consider:

400

1521

25

2401

- FootballteamA,hasplayedthreematches,andhasscored{1,2,3}goals in each match respectively.
- FootballteamB,hasplayedtwomatches,andhasscored{2,4}goalsin eachmatch respectively.
- Yourtaskistocompute,foreachmatchofteamB,thetotalnumber of matches of team A,
- whereteamAhasscoredlessthanorequaltothenumberofgoalsscored by team B in thatmatch.



Intheabovecase:

- For 2 goals scored by team Binits first match, team Ahas 2 matches with scores 1 and 2.
- For4goalsscoredbyteamBinitssecondmatch,teamAhas3matches with scores 1, 2

and 3. Hence, the answer: {2,3}.

Complete the code in the editor below. The programmust return an array of mpositive

integers, one for each maxes [i] representing the total number of elements nums [j] satisfying nums [j] \leq maxes [i] where $0 \leq$ j < n and $0 \leq$ i < m, in the given order. It has the following:

nums[nums[0],...nums[n-1]]: first array of positive integers maxes[maxes[0],...maxes[n-1]]:secondarrayofpositiveintegers Constraints:

 $2 \le n, m \le 105, 1 \le nums[j] \le 109, where 0 \le j < n, 1 \le maxes[i] \le 109, where 0 \le j < m.$

InputFormatForCustomTesting

Input from stdin will be processed as follows and passed to the function.

The first line contains an integern, the number of elements in nums.

Thenextnlineseachcontainanintegerdescribingnums[j]where0≤j<n.

Thenextlinecontainsanintegerm, the number of elements in maxes.

 $The next mline sea ch contain an integer describing maxes [i] where 0 \leq i < m.$

SampleInput

4

1

4

2

4

2

3

5

SampleOutput

