

Given an array A of sorted integers and another non negative integer k , find if there exists 2 indices i and j such that $A[i] - A[j] = k$, $i \neq j$.

Input format

1. First line is number of test cases T . Following T lines contain:
2. N , followed by N integers of the array

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
    int t;
```

```
    scanf("%d",&t);
```

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

```
        int n;
```

```
        scanf("%d",&n);
```

```
        int a[n];
```

```
        for(int i=0;i<n;i++){
```

```
            scanf("%d",&a[i]);
```

```
        }
```

```
        int k;
```

```
        scanf("%d",&k);
```

```
        int flag=0;
```

```
}  
int k;  
scanf("%d",&k);  
int flag=0;  
for(int i=0;i<n;i++){  
    for(int j=i+1;j<n;j++){  
        if(a[i]-a[j]==k || a[j]-a[i]==k){flag=1;break;}  
    }  
    if(flag) break;}  
printf("%d\n",flag);  
}
```

| | Input | Expected | Got | |
|---|--------------------|----------|-----|---|
| ✓ | 1 3 1 3 5 4 | 1 | 1 | ✓ |
| ✓ | 1 3 1 3 5 99 | 0 | 0 | ✓ |

Passed all tests! ✓

Sam loves chocolates and starts buying them on the 1st day of the year. Each day of the year, x , is numbered from 1 to Y . On days when x is odd, Sam will buy x chocolates; on days when x is even, Sam will not purchase any chocolates.

Complete the code in the editor so that for each day N_i (where $1 \leq x \leq N \leq Y$) in array `arr`, the number of chocolates Sam purchased (during days 1 through N) is printed on a new line. This is a function-only challenge, so input is handled for you by the locked stub code in the editor.

Input Format


```
#include<stdio.h>
int main()
{
    int t;
    scanf("%d",&t);
    while(t--){
        int n,c=0;
        scanf("%d",&n);
        for(int i=0;i<=n;i++){
            if(i%2!=0) c=c+i;
        }printf("%d\n",c);
    }
}
```

| | Input | Expected | Got | |
|---|-----------------------------------|--|--|---|
| ✓ | 3 1 2 3 | 1 1 4 | 1 1 4 | ✓ |
| ✓ | 10 71 100 86 54 40 | 1296 2500 1849 729 400 25 | 1296 2500 1849 729 400 25 | ✓ |

The number of goals achieved by two football teams in matches in a league is given in the form of two lists.
Consider:

- Football team A, has played three matches, and has scored $\{1, 2, 3\}$ goals in each match respectively.
- Football team B, has played two matches, and has scored $\{2, 4\}$ goals in each match respectively.
- Your task is to compute, for each match of team B, the total number of matches of team A, where team A has scored less than or equal to the number of goals scored by team B in that match.
- In the above case:
- For 2 goals scored by team B in its first match, team A has 2 matches with scores 1 and 2.
- For 4 goals scored by team B in its second match, team A has 3 matches with scores 1, 2 and 3.


```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
    int s1,s2,ans;
```

```
    scanf("%d",&s1);
```

```
    int ta[s1];
```

```
    for(int i=0;i<s1;i++)
```

```
        scanf("%d",&ta[i]);
```

```
    scanf("%d",&s2);
```

```
    int tb[s2];
```

```
    for(int i=0;i<s2;i++)
```

```
        scanf("%d",&tb[i]);
```

```
    for(int j=0;j<s2;j++)
```

```
    {
```

```
        ans=0;
```

```
for(int i=0;i<s2;i++)  
scanf("%d",&tb[i]);  
for(int j=0;j<s2;j++)  
{  
    ans=0;  
    for(int i=0;i<s1;i++){  
        if(tb[j]>=ta[i])  
            ans++;  
    }printf("%d\n",ans);  
}
```

| | input | expected | Got | |
|---|--------------------------------------|------------------|------------------|---|
| ✓ | 4 1 4 2 4 2 3 5 | 2 4 | 2 4 | ✓ |
| ✓ | 5 2 10 5 | 1 0 3 4 | 1 0 3 4 | ✓ |