Searching_1

Description

Dilpreet wants to paint his dog- Buzo's home that has n boards with dif ferent lengths[A1, A2,..., An]. He hired k painters for this work and eac h painter takes 1 unit time to paint 1 unit of the board.The problem is t o find the minimum time to get this job done under the constraints that any painter will only paint continuous sections of boards, say board {2, 3, 4} or only board {1} or nothing but not board {2, 4, 5}.

Constraints:1<=T<=100,1<=k<=30,1<=n<=50,1<=A[i]<=500

Input

The first line consists of a single integer T, the number of test cases. F or each test case, the first line contains an integer k denoting the num ber of painters and integer n denoting the number of boards. Next line contains n- space separated integers denoting the size of boards.

Output

For each test case, the output is an integer displaying the minimum tim e for painting that house.

Sample Input 1

```
2
2 4
10 10 10 10
2 4
10 20 30 40
```

Sample Output 1

```
20
60
```

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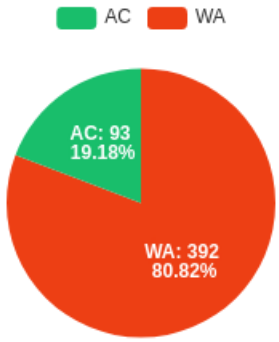
Information

ID	3
Time Limit	1000MS
Memory Limit	256MB
Created By	root
Level	Low
Tags	Show

Statistic Details



Language: Python3 Theme: Solarized Light

```python
def sum(arr, frm, to):
    total = 0
    for i in range(frm, to + 1):
        total += arr[i]
    return total
def findmax(arr,n,k):
    ls_n=[0]*(n+1)
    ls_k=[]
    for i in range(k+1):
        temp=ls_n.copy()
        ls_k.append(temp)
    for i in range(1,n+1):
        ls_k[1][i]=sum(arr,0,i-1)
    for i in range(1,k+1):
        ls_k[i][1]=arr[0]
    for i in range(2,k+1):
```

```
                best=min(best,max(ls_k[i-1][p],sum(arr,p,j-1)))
            ls_k[i][j]=best
    return ls_k[k][n]

count=int(input().strip())
k,n,arr=[],[],[]
for i in range(count):
    num_ls=list(map(int,input().strip().split()))
    k.append(num_ls[0])
    n.append(num_ls[1])
    arr.append(list(map(int,input().strip().split())))

for j in range(count):
    print(findmax(arr[j], n[j], k[j]))
```

You have solved the problem

Submit