**BOOK ALLOCATION PROBLEM**

You are given number of pages in n different books and m students. The books are arranged in ascending order of number of pages. Every student is assigned to read some consecutive books. The task is to assign books in such a way that the maximum number of pages assigned to a student is minimum.

**Input Format:**

First line contains integer t as number of test cases. Next t lines contains two lines. For each test case, 1st line contains two integers n and m which represents the number of books and students and 2nd line contains n space separated integers which represents the number of pages of n books in ascending order.

**Constraints:**

1 < t < 50  
1< n < 100  
1< m <= 50  
1 <= Ai <= 1000

**Output Format**

Print the maximum number of pages that can be assigned to students.

**Sample Input**

1

4 2

12 34 67 90

**Sample Output**

113

**Program-**

#include<iostream>

using namespace std;

bool isvalidconfig(long long int a[],long long int n,long long int m,long long int mid)

{

long long int students=1;

long long int currentpages=0;

for(long long int i=0;i<n;i++)

{

if(a[i]>mid)

{

return false;

}

if((currentpages+a[i])>mid)

{

students++;

currentpages=a[i];

if(students>m)

return false;

}

else

{

currentpages+=a[i];

}

}

return true;

}

long long int bookallo(long long int a[],long long int n,long long int m)

{

long long int max=0,i,finalans;

long long int min=0;

for(i=0;i<n;i++)

max+=a[i];

while(min<=max)

{

long long int mid=(min+max)/2;

if(isvalidconfig(a,n,m,mid))

{

finalans=mid;

max=mid-1;

}

else

{

min=mid+1;

}

}

return finalans;

}

int main()

{

long long int t,n,m,i;

cin>>t;

while(t--)

{

cin>>n>>m;

long long int a[n];

for(i=0;i<n;i++)

cin>>a[i];

long long int ans=bookallo(a,n,m);

cout<<ans<<endl;

}

}