#include <iostream>

using namespace std;

int main(){

//Declaring two variables for inverison count and test case.

int inversion\_count, tc\_count , n;

//dimen variable for dimention for array.

int dimen;

cin>>tc\_count;

cin>>dimen;

//Declaring array with dimension.

int arr[dimen][dimen];

//testcase will executed till test case count is come to zero.

while(tc\_count!=0){

cin>>n;

inversion\_count=0;

//Assiging value inside the array.

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

for(int j=0;j<n;++j){

cin>> arr[i][j];

}

}

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

for(int j =0;j<n; ++j){

for(int x =i;x<n; ++x){

for(int y =j;y<n; ++y){

if(arr[x][y] < arr[i][j]){

inversion\_count++;

}

}

}

}

}

cout<<inversion\_count<<endl;

}

return 0;

}