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Chef loves Chocolates

Problem Code: **SAT102**[Submit \(/SATA2019/submit/SAT102\)](#)

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Chef Loves Chocolates !!

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Chefland is a 2-Dimensional plot. Chef is currently at the top-left corner and has 0 chocolates. Every cell of the plot contains some integer number of chocolates. Chef can only move either to right, down or diagonally down. On every visited cell if the cell has a positive number, Chef gains that number of chocolates and if the cell has a negative number, Chef loses those number of chocolates. Chef finally ends on reaching bottom-right corner. It is possible to have negative number of chocolates.

Your task is to find the number of maximum chocolates Chef can have on reaching the destination.

For example

For a plot having N rows and M columns,

Chef starts at $(1, 1)$, then chef can move to $(1, 2)$ or $(2, 1)$ or $(2, 2)$ i.e. for every cell $[i, j]$ chef can move to $[i + 1, j]$ or $[i, j + 1]$ or $[i + 1, j + 1]$. At no point chef can exit the plot and chef's final location would be (N, M) .

Input ::

- First line contains T , no of test cases.
- Every test starts with 2 integers N, M , no of rows and columns of the plot.
- Each of the next N contain A_1, A_2, \dots, A_m M integers

Output ::

- For every test output an integer, the maximum number of chocolates chef can have.

Constraints ::

- $1 \leq T \leq 20$
- $1 \leq N, M \leq 1000$
- $-1000 \leq A_i \leq 1000$

Example Input ::

```

1
2 3
100 -350 -200
-100 -300 700

```