

Contest Duration: 2025-05-24(Sat) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250524T2100&p1=248>) - 2025-05-24(Sat) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250524T2240&p1=248>) (local time) (100 minutes)

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G - Domino Covering SUM

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Time Limit: 2 sec / Memory Limit: 1024 MiB

Score : 600 points

Problem Statement

There is a grid with H rows and W columns. Let (i, j) denote the cell at the i -th row from the top ($1 \leq i \leq H$) and the j -th column from the left ($1 \leq j \leq W$).

Cell (i, j) ($1 \leq i \leq H, 1 \leq j \leq W$) has an integer $A_{i,j}$ written on it.

Let us place zero or more dominoes on the grid. A domino covers two adjacent cells, namely one of the following pairs:

- cells (i, j) and $(i, j + 1)$ for $1 \leq i \leq H, 1 \leq j < W$;
- cells (i, j) and $(i + 1, j)$ for $1 \leq i < H, 1 \leq j \leq W$.

No cell may be covered by more than one domino.

For a placement of dominoes, define its **score** as the sum of all integers written in cells not covered by any domino.

Find the maximum possible score.

Constraints

- $1 \leq H$
- $1 \leq W$

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- $HW \leq 2000$
 - $-10^{12} \leq A_{i,j} \leq 10^{12}$ ($1 \leq i \leq H, 1 \leq j \leq W$)
 - All input values are integers.
-

Input

The input is given from Standard Input in the following format:

```
H W
A1,1 A1,2 ... A1,W
A2,1 A2,2 ... A2,W
:
AH,1 AH,2 ... AH,W
```

Output

Output the answer.

Sample Input 1

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```
3 4
3 -1 -4 1
-5 9 -2 -6
-5 3 -5 8
```

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Sample Output 1

Copy

```
23
```

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The grid is as follows:

3	-1	-4	1
-5	9	-2	-6
-5	3	-5	8

For example, the placement below yields a score of 23.

3			
	9		
	3		8

No placement achieves a score of 24 or higher, so output 23.

Sample Input 2

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```
5 5
-70 11 -45 -54 -30
-99 39 -83 -69 -77
-48 -21 -43 -96 -24
-54 -65 21 -88 -44
-90 -33 -67 -29 -62
```

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Sample Output 2

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```
39
```

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Sample Input 3

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```
8 9
-74832 16944 58683 32965 97236 -52995 43262 -51959 40883
-58715 13846 24919 65627 -11492 -63264 29966 -98452 -75577
40415 77202 15542 -50602 83295 85415 -35304 46520 -38742
37482 56721 -38521 63127 55608 95115 42893 10484 70510
53019 40623 25885 -10246 70973 32528 -33423 19322 52097
79880 74931 -58277 -33783 91022 -53003 11085 -65924 -63548
78622 -77307 81181 46875 -81091 63881 11160 -82217 -55492
62770 39530 -95923 92440 -69899 77737 89392 -14281 84899
```

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Sample Output 3

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```
2232232
```

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'#telegram)

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