

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)

[Back to Home \(/home\)](/home)

[🏠 Top \(/contests/abc407\)](/contests/abc407)

[📋 Tasks \(/contests/abc407/tasks\)](/contests/abc407/tasks)

[❓ Clarifications \(/contests/abc407/clarifications\)](/contests/abc407/clarifications)

[📊 Results ▼](#)

[🏆 Standings \(/contests/abc407/standings\)](/contests/abc407/standings)

[🏆 Virtual Standings \(/contests/abc407/standings/virtual\)](/contests/abc407/standings/virtual)

[📖 Editorial \(/contests/abc407/editorial\)](/contests/abc407/editorial)

[💬 Discuss \(https://codeforces.com/blog/entry/143155\)](https://codeforces.com/blog/entry/143155)



# G - Domino Covering SUM

[Editorial \(/contests/abc407/tasks/abc407\\_g/editorial\)](/contests/abc407/tasks/abc407_g/editorial)



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

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

2026-01-02 (Fri)  
05:24:38 +11:00

- $HW \leq 2000$
- $-10^{12} \leq A_{i,j} \leq 10^{12}$  ( $1 \leq i \leq H, 1 \leq j \leq W$ )
- 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

Copy

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

Copy

## Sample Output 1

Copy

23

Copy

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

Copy

```
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
```

Copy

## Sample Output 2

Copy

39

Copy

## Sample Input 3

Copy

```
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
```

Copy

## Sample Output 3

Copy

2232232

Copy

#telegram)

url=https%3A%2F%2Fatcoder.jp%2Fcontests%2Fabc407%2Ftasks%2Fabc407\_g%3Flang%3Dpy%26title=G%20i  
l)

2026-01-02 (Fri)  
05:24:38 +11:00

---

[Rule \(/contests/abc407/rules\)](/contests/abc407/rules) [Glossary \(/contests/abc407/glossary\)](/contests/abc407/glossary)

[Terms of service \(/tos\)](/tos) [Privacy Policy \(/privacy\)](/privacy) [Information Protection Policy \(/personal\)](/personal) [Company \(/company\)](/company)

[FAQ \(/faq\)](/faq) [Contact \(/contact\)](/contact)

Copyright Since 2012 ©AtCoder Inc. (<http://atcoder.co.jp>) All rights reserved.