The knight

Cost: 12 | Solved: 67

Memory limit: 256 MBs

Time limit: 1 s

Input: input.txt

Output: output.txt

Task:

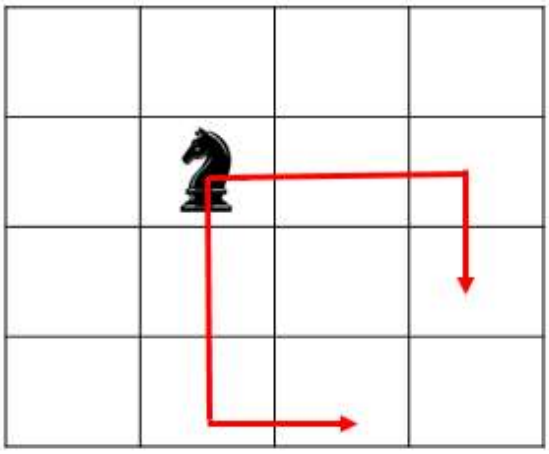
You are given a chessboard of ***n*** rows and ***m*** columns. There's an integer number on each cell of the board and the knight staying at the upper-left corner.

Help the knight reach the lower-right corner and collect the greatest sum possible.

The knight can move in only two directions:

2 cells to the right and 1 cell down *(x+2, y+1)*;

2 cells down and 1 cell to the right *(x+1, y+2);*



Input:

The first line contains two naturals ***n*** and ***m*** ($1 \le n, m \le 10^3$) – the quantity of rows and columns of the chessboard.

The next ***n*** lines contain ***m*** numbers – the values of the board's elements.

The upper-left corner's coordinates are (1, 1), the lower-right corner's – (***n***, ***m***).

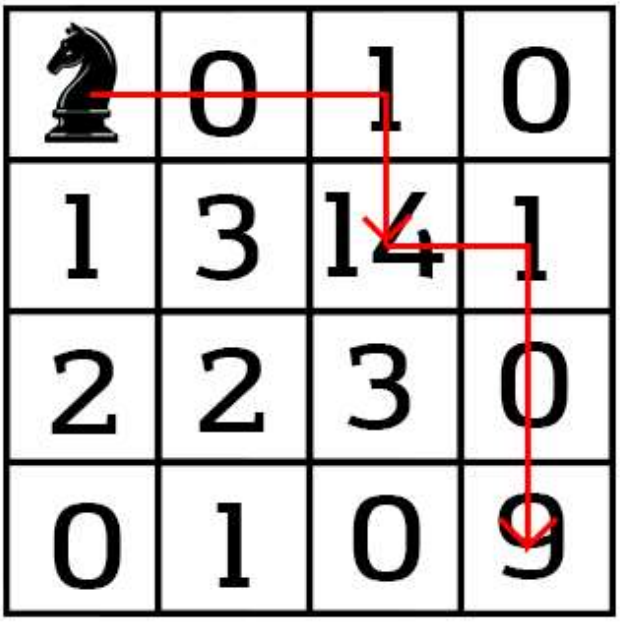
Output:

The greatest sum possibly collected. If the knight can't reach the lower-right corner, output «-».

Example:

Input	Output
3 3 5 0 0 0 1 2 1 0 1	-
4 4 5 2 1 0 1 0 0 0 2 1 3 0 0 0 1 7	13

An example:



The greatest sum possible here is 23, according to the shown path.