

Problem G Greedy Eat

Time Limit: 3 seconds
Memory Limit: 512 Megabytes



Figure H. 1. Mr. Greedy

Problem description

Mr. Greedy is a potential sumo who wants to gain weight, so he needs to eat foods which have as much energy as possible. The dishes with calorie supply weights are arranged on a square matrix size $M \times M$. He is allowed to select a food area inside matrix $M \times M$ which is must form a continuous square of size $N \times N$ ($N \leq M$).

Please help Mr. Greedy to select the best squared food are which has the most calorie energy. The input data using standard input stream (stdin).

Input

Line 1: M N ($M \leq 1000$; $1 \leq N \leq M$)

Line j : each line has M values C_{jk} in integer value which are calorie values, where j and k start from 1 to M , and $C_{jk} \leq 1000$

Output

The output data is the maximum total value of energy (in calorie) which Mr. Greedy can receive.

Example:

Input	Output
4 3 1 9 1 1 6 9 9 9 4 9 9 9 5 9 9 15	87

Explain: M=4, N=3, so the maximum selected food area in square is 3 x 3

Test case 1: input data				The best food area which has the most energy size 3x3			
4	3						
1	9	1	1				
6	9	9	9	9	9	9	
4	9	9	9	9	9	9	
5	9	9	15	9	9	15	