

## Plants

Time Limit : 1 second

Memory Limit : 16MB

Supervin has a farm. His farm can be represented as  $R \times C$  grids. In every grid of his farm, there is a plant. Every plant has its own fertility level, represented by a non-negative integer.

Supervin can move one square horizontally or vertically (not diagonally) in 1 second. If he stands on a plant, he can choose to pick the plant up. At one time, he can bring only one plant. Assume that dropping and picking up the plants takes no time. For this task, Supervin only has  $T$  seconds.

Supervin wants to collect some of the plants in his truck, such that the sum of fertility of the collected plants is maximum. To collect a plant, Supervin must pick the plant up and drop the plant in the truck. The truck is located at the top left of the grid. Initially, At the beginning, Supervin is also located at the top left of the grid. Count the maximum sum of fertility of the collected plants with only  $T$  seconds.

Note that beside the truck, there is a plant in the top left of the grid as well.

### Input

The first line consists of three integers  $R$ ,  $C$ , and  $T$ , separated by single space.

The next  $R$  lines consist of  $C$  space separated integers. The  $j$ -th integer on the  $i$ -th line represents the fertility of the plant located in the  $i$ -th row and  $j$ -th column of the grid.

### Output

A single integer, the maximum sum of fertility of the collected plants with only  $T$  seconds.

### Constraint

$1 \leq R, C \leq 100$ ,  $0 \leq T \leq 1000$ . Fertility level is less than 1 000 000.

Subtask 1 (10 points) : All plants will have the same fertility.

Subtask 2 (20 points) : Only up to 20 plants have the fertility greater than 0.

Subtask 3 (30 points) :  $1 \leq R, C, T \leq 20$

Subtask 4 (40 points) : No restriction

Subtask 5 : Sample

| <b>Input Sample</b>         | <b>Output Sample</b> |
|-----------------------------|----------------------|
| 3 2 10<br>0 2<br>1 4<br>1 6 | 10                   |