

Research

| Type | Input file | Output file | Time limit | Memory limit |
|-------|------------|-------------|------------|--------------|
| Batch | stdin | stdout | 1 second | 256 MB |

Statement

Gridland is a country whose cities are located on an $N \times N$ grid, with a city in each square. The cities are referred to by their row and column, with (i, j) referring to the city in the i th row and j th column, with row labels numbered from 1 to N running north to south and column labels similarly numbered from 1 to N running west to east.

Dr. Godfrey is an aspiring computer scientist who has arrived in city $(1, 1)$ and will spend the next K days doing research in Gridland. In each city (i, j) , there is 1 research project which takes $T_{i,j}$ days to complete. Each project can be completed at most once. To travel between cities there are train services. A train service can take Dr. Godfrey from a city to any city directly south or directly east of the original city. Wierdly, a train service takes S days regardless of the trip being made.

Help Dr. Godfrey maximise the number of projects he can complete.

Input

The first line contains 3 integers $N K S$. The next N lines each contains N integers, with the j th integer on the i th line ($1 \leq i, j \leq N$) being the value of $T_{i,j}$.

Output

Output 1 integer, the maximum number of projects.

Sample Input

```
2 8 1
1 4
2 3
```

Sample Output

```
3
```

Explanation

Dr. Godfrey can do the projects at cities (1,1), (2,1) and (2,2). It takes 6 days to complete the projects and 2 days to travel between the cities. He has exactly enough time, 8 days, to allow for this itinerary.

Scoring

For each test case, your program shall be awarded 100% of the marks if the correct answer is written, and 0% otherwise.

Constraints

- $1 \leq N \leq 300$
- $1 \leq S \leq K \leq 10^9$
- $1 \leq T_{i,j} \leq K$ for all (i, j)

Subtasks

| Number | Points | Max N | Other Constraints |
|--------|--------|---------|-------------------|
| 1 | 20 | 10 | None |
| 2 | 20 | 60 | $K \leq 60$ |
| 3 | 30 | 60 | None |
| 4 | 30 | 300 | None |