Dessert

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Zag has a box full of desserts. This box consists of $n \times m$ grids, and the grid in the ith row and jth column contains $a_{i,j}$ desserts. To prevent his friend Reb from stealing his desserts, Zag checks his dessert box everyday.

However, Reb recently found that Zag seems not to be so careful when he checks his dessert box. To be specific, when Zag checks his dessert box, he will only check two things:

1. whether the grid containing dessert yesterday contains dessert now.
2. whether the maximum of desserts in each row and each column remains unchanged

If Zag finds the two conditions hold, he will assume that Reb didn't steal his dessert.

As a result, Reb wants to know how many desserts can he steal without being caught by Zag.

Note that Reb can not only steal desserts from some grids, he can also rearrange the desserts to ensure that Zag won't discover. That means Reb can move some desserts from one grid to another several times.

Input

The first line contains two integers $n, m (1 \leq n, m \leq 100)$, numbers of rows and numbers of columns.

Each of the next n lines contains m integers, each integer represents $a_{i,j} (0 \leq a_{i,j} \leq 10^9)$.

Output

Output one integer, the maximum of desserts Reb can steal.

Examples

standard input	standard output
5 5 2 3 0 0 2 1 0 7 2 1 5 3 5 2 2 1 3 0 1 2 5 2 5 0 2	16
3 2 30 20 20 10 8 8	35