Participants

In a galaxy far, far away, a programming contest is taking place. Your task is to choose the participants!
N students have applied, and each one of them has some knowledge in each of M different categories. Knowledge can be represented as a real number. You can send at most K students to the contest, but no student can compete in more than one category. Multiple students can compete in a single category.
For each student, their knowledge of each category is given.
Choose participants for a contest and categories they will compete in, so that the sum of knowledge is maximal.

Input

The first line of input contains integers N, M and K ($1 \leq M \leq 100$, $1 \leq K \leq N \leq 100$). Each of the next M lines describes knowledge for one category. In each line, there are N pairs (i, s), where i is the index of the student, and s is a positive real number representing their knowledge of corresponding category ($0 \leq s \leq 10$). Pairs are given in order of decreasing knowledge. Students are numbered from 1 to N. In each line, every student will appear exactly once.

Output

The first and the only output line should contain maximum sum of knowledge chosen students can have, with exactly one digit in decimal part.

Sample input / Sample output

Sample input	Sample output
3 2 2 2 3.0 1 0.2 3 0.1 3 1.0 2 0.5 1 0.2	4.0
4 4 3 4 5.0 2 4.0 3 2.0 1 1.0 2 2.0 3 1.0 1 0.5 4 0.3 4 6.0 3 5.0 2 2.0 1 0.0 1 4.0 2 3.0 4 0.6 3 0.3	15.0

Description of the first test case

There are two categories. In the first category, best student is the second one, with knowledge 3.0. He is followed by student numbered 1, with knowledge 0.2, and then number 3, with knowledge 0.1. Best solution is to choose students 2 and 3, in categories 1 and 2, respectively.