Problem I
I Wanna Be The Very Best

In order to become the very best Pokenom trainer, Bash needs to prepare a team of Pokenom to participate in the Pokenom world championship.

Bash has N Pokenoms. Each Pokenom has 3 stats: Attack, Defense and Health. Bash wants to select K Pokenoms with highest attack, K Pokenoms with highest defense and K Pokenoms with highest Health.

After selection, Bash found something strange: his team have less than $3 \times K$ Pokenoms!

Bash looks carefully at $N = 4$ Pokenoms he has:

- 'Chikapu': Attack = 100, Defense = 100, Health = 100
- 'Batterfly': Attack = 10, Defense = 10, Health = 10
- 'Mewthree': Attack = 200, Defense = 200, Health = 80
- 'Dragonon': Attack = 150, Defense = 150, Health = 90

When Bash selects Pokenom with $K = 1$, only 'Mewthree' and 'Chikapu' are selected! This is because 'Mewthree' has highest attack and highest defense!

Your task is simple, you are given the stats of all N Pokenoms and the number K. Calculate how many different Pokenoms are there in Bash's team.

Input

- The first line of input contains 2 integers N and K ($1 \le K \le N \le 1\,000$).
- In the next N lines, the i-th line contains 3 integers: A_i, D_i and H_i, representing the 3 stats of the i-th Pokenom. A_i, D_i and H_i are unsigned 32-bit integers.

It is guaranteed that no 2 Pokenom have same Attack, no 2 Pokenom have same Defense, and no 2 Pokenoms have same Health.

Output

Output one line containing exactly one integer: the number of Pokenom in Bash's team.

Sample Input 1

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4 1
100 100 100
10 10 10
200 200 80
150 150 90
```

Sample Output 1

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2
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