

Most Servings Meal

[English](#)

[Vietnamese](#)

Lisa works as a waitress in a restaurant. Tonight is her birthday so Lisa asked the chef to prepare his special meal for her friends. The chef's meal is made of N ingredients. To prepare one serving of the meal he needs a certain amount of each ingredient.

There are some ingredients already available in the kitchen and Lisa will buy the rest at the grocery store. The store has all the necessary ingredients, each coming in smaller and larger packages. Lisa has M dollars and wants to spend them so that the chef can make the most servings of his meal.

Input

The first line contains two integers N and M , $1 \leq N \leq 100$, $1 \leq M \leq 100\,000$. Each of the following N lines contains 6 positive integers, information about one ingredient. These specify, in order:

- X , $10 \leq X \leq 100$, the amount of the ingredient needed in one serving;
- Y , $1 \leq Y \leq 100$, the amount of the ingredient already available in the kitchen;
- SM , $1 \leq SM < 100$, the size of the smaller package at the store;
- PM , $10 \leq PM < 100$, the price of the smaller package;
- SV , $SM < SV \leq 100$, the size of the larger package; and
- PV , $PM < PV \leq 100$, the price of the larger package.

Output

Output the largest number of servings the chef can make if Lisa spends her money wisely.

Sample

Input:

```
2 100
10 8 10 10 13 11
12 20 6 10 17 24
```

Output:

```
5
```

Input:

```
3 65
10 5 7 10 13 14
10 5 8 11 14 15
10 5 9 12 15 16
```

Output:

```
2
```

In the first example, for 99 dollars Lisa will buy three smaller and one larger package of the first ingredient, as well as one smaller and two larger packages of the second ingredient ($3 \times 10 + 1 \times 11 + 1 \times 10 + 2 \times 24 = 99$).

The chef will then have 51 units ($8 + 3 \times 10 + 1 \times 13$) of the first ingredient and 60 units ($20 + 1 \times 6 + 2 \times 17$) of the second ingredient, enough for 5 servings.