Problem E. Hachiyo Tea

Time limit 1000 ms
Memory limit 256MB

Problem Description

Hachiyo Tea (八曜和茶) is a well-known and highly popular drink shop in Taiwan. Recently, the brand expanded its reach by opening a new branch in Taipei, making it the first and currently the only Hachiyo Tea shop in the city. This grand opening has quickly gained widespread attention, drawing large crowds and resulting in long waiting lines of eager customers.

At Hachiyo Tea, customers can choose from N distinct types of tea, each crafted to offer a unique taste experience. Every tea is associated with a price, denoted by p_i, and contains a specific amount of caffeine, represented by c_i. Additionally, the availability of each type of tea is limited to k_i cups.

Benson, a passionate tea lover and caffeine enthusiast, is determined to make the most of this opportunity by maximizing his caffeine intake. However, Benson faces a limitation: his budget. With only X money at his disposal, he must carefully plan his purchases to ensure he obtains the highest possible amount of caffeine while staying within his budget.

To achieve his goal, Benson is permitted to purchase multiple cups of any tea, as long as the stock allows it. Your task is to determine the maximum amount of caffeine that Benson can obtain, given his budget constraints and the availability of each tea type.

Input format

The first input line contains two integers N ($1 \leq N \leq 100$) and X ($1 \leq X \leq 10^5$): the number of distinct types of tea and Benson's budget.

The second line contains N integers $p_1, p_2, \ldots, p_N$ ($1 \leq p_i \leq 1000$): the price of each tea.

The third line contains N integers $c_1, c_2, \ldots, c_N$ ($1 \leq c_i \leq 1000$): the caffeine content of each tea.

The final line contains N integers $k_1, k_2, \ldots, k_N$ ($1 \leq k_i \leq 1000$): the available cups of each tea.

Output format

Print one integer: the maximum amount of Benson's caffeine intake.

Subtask score

Subtask	Score	Additional Constraints
1	50	$k_i = 1$
2	30	$k_i \leq 10$
3	20	No constraints

Sample

Sample Input 1

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3 9
2 6 3
8 5 4
3 5 2
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Sample Output 1

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28
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Notes

For your health, please be mindful of your caffeine intake and don't overdo it like Benson.