



Server Time: Thu Nov 22, 2018 12:27 am

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1233 - Coin Change (III)

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Time Limit: 2 second(s)

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In a strange shop there are n types of coins of value $A_1, A_2 \dots A_n$. $C_1, C_2, \dots C_n$ denote the number of coins of value $A_1, A_2 \dots A_n$ respectively. You have to find the number of different values (from 1 to m), which can be produced using these coins.

Input

Input starts with an integer T (≤ 20), denoting the number of test cases.

Each case starts with a line containing two integers n ($1 \leq n \leq 100$), m ($0 \leq m \leq 10^5$). The next line contains $2n$ integers, denoting $A_1, A_2 \dots A_n, C_1, C_2 \dots C_n$ ($1 \leq A_i \leq 10^5, 1 \leq C_i \leq 1000$). All A_i will be distinct.

Output

For each case, print the case number and the result.

Sample Input	Output for Sample Input
2	Case 1: 8
3 10	Case 2: 4
1 2 4 2 1 1	
2 5	
1 4 2 1	

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