1233 – Coin Change (III)

In a strange shop there are **n** types of coins of value $\mathbf{A_1, A_2 \dots A_n}$. $\mathbf{C_1, C_2, \dots C_n}$ denote the number of coins of value $\mathbf{A_1, A_2 \dots A_n}$ 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 $\mathbf{T (\leq 20)}$, denoting the number of test cases.

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

Output

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

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