

Receipt

One day Lili asks Jojo to help her buy some ice cream. Jojo agrees to help her, but after buying them, Jojo forgot to ask for the receipt. Fortunately, he remembers the price for each flavour and the quantity of each flavour. Calculate how much money Lili has to pay Jojo.

Format Input

The first line will be an integer T , denoting the number of test cases.

Each test case will start with an integer N , denoting how many flavours available.

The next line contains N integers (P_1, P_2, \dots, P_n), the K -th number represents the price of K -th flavour.

The next line will also consist of N integers (Q_1, Q_2, \dots, Q_n), denoting the quantity of K -th flavour that Jojo bought.

Format Output

For each test case, print "Case #X: ", then on the same line, print how much money Lili has to pay Jojo.

Constraints

$1 \leq T \leq 10$

$1 \leq N \leq 100$

$1 \leq P_1, P_2, \dots, P_n \leq 10000$

$0 \leq Q_1, Q_2, \dots, Q_n \leq 10000$

Sample Input	Sample Output
2 3 5 3 20 2 5 2 4 1 2 3 4 1 2 3 4	Case #1: 65 Case #2: 30