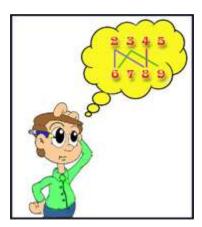
1149 - Factors and Multiples

You will be given two sets of integers. Let's call them set **A** and set **B**. Set **A** contains **n** elements and set **B** contains **m** elements. You have to remove \mathbf{k}_1 elements from set **A** and \mathbf{k}_2 elements from set **B** so that of the remaining values no integer in set **B** is a multiple of any integer in set **A**. \mathbf{k}_1 should be in the range [0, n] and \mathbf{k}_2 in the range [0, m].

You have to find the value of $(\mathbf{k}_1 + \mathbf{k}_2)$ such that $(\mathbf{k}_1 + \mathbf{k}_2)$ is as low as possible. **P** is a multiple of **Q** if there is some integer **K** such that $\mathbf{P} = \mathbf{K} * \mathbf{Q}$.



Suppose set A is {2, 3, 4, 5} and set B is {6, 7, 8, 9}. By removing 2 and 3 from A and 8 from B, we get the sets {4, 5} and {6, 7, 9}. Here none of the integers 6, 7 or 9 is a multiple of 4 or 5.

So for this case the answer is **3** (**two** from set **A** and **one** from set **B**).

Input

Input starts with an integer $T \leq 50$, denoting the number of test cases.

The first line of each case starts with an integer **n** followed by **n** positive integers. The second line starts with **m** followed by **m** positive integers. Both **n** and **m** will be in the range [1, 100]. Each element of the two sets will fit in a 32 bit signed integer.

Output

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

Sample Input	Output for Sample Input
2	Case 1: 3
4 2 3 4 5	Case 2: 0
4 6 7 8 9	
3 100 200 300	
1 150	