

Difficult Job

Time Limit – 1 seconds

Kodu has given up on the difficult coach job and switched to food tasting instead. Having skipped breakfast like a professional connoisseur, he is visiting a cured meat festival. The most renowned cook at the festival, Monu Mia, has prepared N equal hamburgers which need to be distributed to M tasters such that each taster gets a precisely equal amount. He will use his trusted knife to cut them into pieces.

In order to elegantly divide the hamburgers, the number of cuts splitting individual hamburgers must be as small as possible. For instance, if there are two hamburgers and six tasters (the first test case below), it is sufficient to split each sausage into three equal parts, making a total of four cuts. On the other hand, if there are three hamburgers and four tasters (the second test case below), one possibility is cutting off three quarters of each sausage. Those larger parts will each go to one of the tasters, while the fourth taster will get the three smaller pieces (quarters) left over.

Kodu wants to try the famous hamburgers, so he volunteered to help Monu Mia. Help them calculate the minimum total number of cuts needed to carry out the desired division.

Input :

First line of input contains an integer T ($1 \leq T \leq 100$), number of test cases to follow.

The first and only line of each test case contain two positive integers, N and M ($1 \leq N, M \leq 1000$), the number of sausages and tasters, respectively.

Output:

For each test case, print the test case number and the required minimum number of cuts.

Sample Input	Sample Output
3 2 6 3 4 6 2	Case 1 : 4 Case 2 : 3 Case 3 : 0