E. Coin and Bulbs

Score: 1

CPU: 1s
Memory: 1024MB

This is yet another boring problem about a coin and some bulbs, if you feel bored you should skip this problem!

There are n bulbs. Initially, each bulb are turned off. In each move you can select one random bulb (Probability of selecting each bulb is same). If the bulb is already turned on, you do nothing. If the bulb is turned off, you must toss a coin. If it's head, you can turn the bulb on, but if it's tail, the bulb will remain off.

To make the problem even more boring, the coin is not a fair coin, the chance of landing a tail is **p%**.

What is the expected number of moves needed to turn on all the bulbs?

Input

The first line will contain **T (1<=T<=5000)** denoting the number of test cases. For each case, there will be two integers **n (1<=n<=40)** and **p(0<=p<=99)**.

Output

For each case, print the case number and the expected number of moves as a reduced fraction **p/q**;

Sample

Input	Output
4 1 50 2 50 2 0 5 20	Case 1: 2/1 Case 2: 6/1 Case 3: 3/1 Case 4: 685/48