

Digits in B Base

Lab 5

Computer Programming

Due date: September 27, 2019, 11 PM

Problem Statement: Given T test cases and each test case has two integers inputs N and B, find number of digits in base B representation of N. Initially, N is in decimal.

Input

The first line of input is T denoting the number of test cases. The next T lines have two integer N and B respectively.

Output

For each test case, output number of digits of N in base B.

Constraints

$$1 \leq T \leq 10^6$$

$$0 \leq N \leq 10^{18}$$

$$2 \leq B \leq 100$$

Sample Test Case

Input	Output
4	3
5 2	2
5 3	2
5 5	1
5 25	