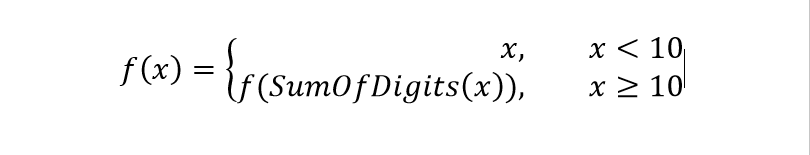
Azura is a little girl. Recently she has completed a math course. To test how usefulness the course was, she is now trying to solve a problem. The problem is one of the home tasks she was given by his course teacher. The problem is given as a function like below:



Where the function returns sum of the digits of the number x.

It’s an easy task, right? But the actual problem is a bit more complex for her.

The original problem is as follows.

You are given q queries of type.

The answer to each query is how many times the number k appears in the sequence.

Can you solve the problem ?