A. Sum of Round Numbers

time limit per test: 1 second
memory limit per test: 256 megabytes
input: standard input
output: standard output

A positive (strictly greater than zero) integer is called *round* if it is of the form `d00...0`. In other words, a positive integer is round if all its digits except the leftmost (most significant) are equal to zero. In particular, all numbers from 1 to 9 (inclusive) are round.

For example, the following numbers are round: 4000, 1, 9, 800, 90. The following numbers are **not** round: 110, 707, 222, 1001.

You are given a positive integer n ($1 \le n \le 10^4$). Represent the number n as a sum of round numbers using the minimum number of summands (addends). In other words, you need to represent the given number n as a sum of the least number of terms, each of which is a round number.

Input

The first line contains an integer t ($1 \le t \le 10^4$) — the number of test cases in the input. Then t test cases follow.

Each test case is a line containing an integer n ($1 \le n \le 10^4$).

Output

Print t answers to the test cases. Each answer must begin with an integer k — the minimum number of summands. Next, k terms must follow, each of which is a round number, and their sum is n. The terms can be printed in any order. If there are several answers, print any of them.

Example

input Copy

```
5
5009
7
9876
10000
10
```

output Copy

```
2
5000 9
1
7
4
800 70 6 9000
1
10000
1
10
```


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