1 Ugly problem

1.1 Description

Everyone hate ugly problems.

You are given a positive integer. You must represent that number by sum of palindromic numbers.

A palindromic number is a positive integer such that if you write out that integer as a string in decimal without leading zeroes, the string is an palindrome. For examples, 1 is a palindromic number and 10 is not.

1.2 Input

The input contains multiple test cases.

The first line contains an integer T, the number of test cases.

Then T lines follows. In each line, there's a positive integer $s(1 \leq s \leq 10^{1000})$.

1.3 Output

For each test case, output "Case #XXX:" on the first line where XXX is the number of that test case starting from 1. Then output the number of palindromic numbers you used, n, on one line. n must be no more than 50. Then output n lines, each containing one of your palindromic numbers. Their sum must be exactly s.

1.4 Sample

Sample Input	Sample Output
2 18 1000000000000	Case #1: 2 9 9 Case #2: 2 999999999999 1

1.5 Hint

$9 + 9 = 18$

$999999999999 + 1 = 1000000000000$