Problem B. Binary system to Octal system

You are tired of converting integers from decimal system to another bases. So in this problem, we decided to ask you to write a program that converts an integer written in binary system into octal system.

Input

Your input consists of an arbitrary number of records, but no more than 100.

Each record is a line that contains an integer n $(1 \leq n < 2^{1000})$ written in binary system. It is guaranteed that the first digit of n is '1'.

The end of input is indicated by a line containing only the value -1.

Output

For each input record, print n written in octal system. Do not write leading zeroes.

Example

Standard input	Standard output
101	5
1010	12
1101101101	155
-1	

Time Limit

1 second.