

Stickers (stickers)

You are buying a lot of plastic boxes to store your stuff.

Each plastic box comes with k sets of stickers. Each set of stickers consists of 10 stickers: one of each digit (0-9).

You want the boxes to have sequential labels: 1, 2, 3, etc. You create these labels using the stickers you get with the boxes.

Of course, you never throw the unused stickers away, as they may come in handy later. For example, after you label boxes 1 through 7, you already have seven unused stickers with the digit 8, and six unused stickers with the digit 3. Later, when labelling box 33, you will need to use one of these spare stickers.

Task

Assume that you keep on repeating the following procedure:

1. Buy a box.
2. Add the new stickers to the ones you already have.
3. Use the stickers to put the correct label onto the new box.

Given the number k , what is the first box you will **not** be able to label?

Input specification

The input file contains a single line with a single integer k . You may assume that $1 \leq k \leq 15$.

Output specification

Output a single line with a single integer: the first number you will not be able to create out of the stickers you'll have when labelling the corresponding box. (If, for some k , it is possible to label boxes forever, output the number 0 instead.)

Examples

input output	
1	1111111111

*This output value is **wrong**, the example only illustrates the I/O format.*