CODEFORCES
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HOME   TOP   CATALOG   CONTESTS   GYM   **PROBLEMSET**   GROUPS   RATING   EDU   API   CALENDAR   HELP

PROBLEMS   SUBMIT   STATUS   STANDINGS   CUSTOM TEST

C. Minimum Varied Number

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

Find the minimum number with the given sum of digits s such that **all** digits in it are distinct (i.e. all digits are unique).

For example, if $s = 20$, then the answer is 389. This is the minimum number in which all digits are different and the sum of the digits is 20 ($3 + 8 + 9 = 20$).

For the given s print the required number.

Input

The first line contains an integer t ($1 \le t \le 45$) — the number of test cases.

Each test case is specified by a line that contains the only integer s ($1 \le s \le 45$).

Output

Print t integers — the answers to the given test cases.

Example

input	Copy
4 20 8 45 10	

output	Copy
389 8 123456789 19	

Supported by

ITMO UNIVERSITY

→ **Virtual participation**

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

[Start virtual contest]

→ **Problem tags**

greedy   *800

No tag edit access

→ **Contest materials**

- Announcement ✕

Codeforces Round #811 (Div. 3)
Finished