

D. Print a 1337-string...

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

The subsequence is a sequence that can be derived from another sequence by deleting some elements without changing the order of the remaining elements.

You are given an integer n .

You have to find a sequence s consisting of digits $\{1, 3, 7\}$ such that it has exactly n subsequences equal to 1337.

For example, sequence 337133377 has 6 subsequences equal to 1337:

- 337133377 (you can remove the second and fifth characters);
- 337133377 (you can remove the third and fifth characters);
- 337133377 (you can remove the fourth and fifth characters);
- 337133377 (you can remove the second and sixth characters);
- 337133377 (you can remove the third and sixth characters);
- 337133377 (you can remove the fourth and sixth characters).

Note that the length of the sequence s must not exceed 10^5 .

You have to answer t independent queries.

Input

The first line contains one integer t ($1 \leq t \leq 10$) — the number of queries.

Next t lines contains a description of queries: the i -th line contains one integer n_i ($1 \leq n_i \leq 10^9$).

Output

For the i -th query print one string s_i ($1 \leq |s_i| \leq 10^5$) consisting of digits $\{1, 3, 7\}$. String s_i must have exactly n_i subsequences 1337. If there are multiple such strings, print any of them.

Example

input	Copy
2 6 1	
output	Copy
113337 1337	

Educational Codeforces Round 70 (Rated for Div. 2)

Finished

Practice



→ Virtual participation

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Start virtual contest

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Clone Contest

→ Submit?

Language: GNU G++11 5.1.0

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Submit

→ Problem tags

combinatorics constructive algorithms
math strings *1900

No tag edit access

→ Contest materials

- Announcement #1 (en)
- Announcement #2 (ru)
- Tutorial (en)

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