First n “strange” numbers X76141_en

A positive number $n > 0$ is “strange” if when adding each of its digits raised to the number of digits that make it up, we obtain the number itself.

For example, 153 (which has three digits) is “strange”, $153 = 1^3 + 5^3 + 3^3$.

Make a program that returns the first n “strange” numbers.

Input

A positive integer, $n > 0$, asking for the first n “strange” numbers.

Output

Prints the list with the first n “strange” numbers.

Observation

It is forbidden to use any external function except `cin` and `cout`, and also the program must be well documented if not it will be invalidated.

Problem information

Author: PRO1

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