

Ross got a puzzle 400 pts

Ross met a small wizard who only knows four numbers 2, 3, 5 and 7. Ross wants to tell him some more numbers. But wizard will like only those numbers that are divisible by all these 4 numbers. So whenever the wizard asks him to tell a number with "N" digits, Ross tells him the smallest number that is divisible by 2, 3, 5 and 7 and have "N" digits (without leading zeros).

Input

Only line of input will contain an integer "N".

Output

Print the smallest number of length "N", that is divisible by all 2, 3, 5 and 7 simultaneously. If no such number exists, print "-1" without quotes.

Constraints

$1 \leq N \leq 10^4$

Example

Input:

1

Output:

-1

Input:

5

Output:

10080