Input file	Output file	Time limit	Memory limit
divisors.in	divisors.out	1 second	16 MB

Divisors

Given a positive integer D ($1 \leq D \leq 100000$), your task is to find the smallest number N with exactly D divisors. In the case where N exceeds 10^{18}, output –1 as the result.

Few example cases are presented below.

Input	Output	Comment
1	1	Smallest number with one divisor.
2	2	Smallest number with two divisors: 1 and 2.
3	4	Smallest number with three divisors: 1, 2 and 4.