

Problem B. Terrible Additive Number Theory Problem

Input file: *standard input*
Output file: *standard output*
Time limit: 1 second
Memory limit: 256 mebibytes

Define P_i as the i -th prime.

Find the number of solutions x such that $x = \prod_{i=l}^r P_i = 2^k P_{r+1} - 1$, where $l, r, k \in \mathbb{N}^+$, $1 \leq l \leq r$, and $x \leq n$.

Input

Input contains a single integer n ($1 \leq n \leq 10^{18}$)

Output

Output a single integer, indicating the number of solutions less than or equal to n .

Example

standard input	standard output
100	0