Problem D. The Romanian Sieve

Input file:	*standard input*
Output file:	*standard output*
Time limit:	2 seconds
Memory limit:	256 mebibytes

Ionuț Cercel (the son of Petrică Cercel) achieved everything there was to achieve in music after the absolute hit "Made in Romania".

Now he got an interest in competitive programming. In his preparation for the training camp in Phapos, he came across a concept called "The Romanian Sieve", which can be summarized by the following piece of code:

```
int64_t iters = 0;
for (int64_t i = 1; i <= n; i++) {
    for (int64_t j = i; j <= n; j += i) {
        max_div[j] = i;
        iters++;
    }
}
```

As a curious individual, Ionuț asks himself: "Given an integer t, what is the largest value of n such that `iters` $\leq t$ after running the Romanian Sieve algorithm?" Please help him answer this question.

Input

The first line contains an integer t ($1 \leq t \leq 3 \cdot 10^{13}$).

Output

Print one integer: the maximum n such that `iters` $\leq t$ after running the algorithm.

Examples

standard input	*standard output*
11	5
2846010382	149946143