Problem F5106
Summation of Prime Number

You are now familiar with summation and prime numbers. So you decide to find the least integer n, such that the sum of first n prime number is greater than or equal to a given number N.

Input

The input consist of a single integer $N(2 \leq N \leq 1000)$.

Output

Print the least integer n, such that summation of first n prime is greater than or equal to N.

Sample Input

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17
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Sample Output

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4
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Explanation of Sample Data

The first 4 prime number : 2 3 5 7.
The sum of first 3 prime is 10, which is less than $N = 17$.
The sum of first 4 prime is 17, which is exactly $N = 17$, so 4 is the desired answer.