**Factorial Factors**

The factorial function, *n*! = 1 · 2 · ... · *n*, has many interesting properties. In this problem, we want to determine the maximum number of integer terms (excluding 1) that can be used to express *n*!. For example:

8! = 1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 = 2 · 3 · 2 · 2 · 5 · 3 · 2 · 7 · 2 · 2 · 2 = 27 · 32 · 5 · 7

By inspection, it is clear that the maximum number of terms (excluding 1) that can be multiplied together to produce 8! is 11.

The input for your program consists of a series of test cases on separate lines, ended by end-of-file. Each line contains one number, *n*, 2 <= *n* <= 1000000.

For each test case, print the maximum number of factors (excluding 1) that can be multiplied together to produce *n*!. Put the output from each test case on a separate line, starting in the first column.

*Sample Input*

2  
1000000  
1996  
5  
8  
123456

*Sample Output*

1  
3626619  
5957  
5  
11  
426566