

Find the number of positive integral solutions for the equations

$$\frac{1}{x} + \frac{1}{y} = \frac{1}{N!}$$

Input Format

An integer N

Output Format

The number of positive integral solutions for the above equation modulo 1000007

Constraints

$$1 \leq N \leq 10^6$$

Sample Input00

1

Sample Output00

1

Sample Input01

32327

Sample Output01

656502

Sample Input02

40921

Sample Output02

686720