Optimization Function

Tejan is a deep learning engineer and loves algorithms. He was working on an optimization algorithm and he happened to reach a point from where he couldn't continue his research further. For evaluating a function,he needed to compute the value of another function.

Given a natural number N , he had to compute the value of divSum given by :

```
divSum = 0
for i = 1 to N:
    for j = i to N:
        divSum = divSum + DIV(i,j)
```

where DIV(x,y) is the the function that outputs the sum of numbers that divide both x and y. DIV(4,8) = 7

(1,2 and 4 divides both 4 and 8. Therefore DIV(4,8) = 1+2+4 = 7)

Your job is to help Tejan find the value of divSum given the value of N.

Note: This divSum can be very large. So output the answer taking modulo 1000000007.

Input Format

A natural number N

Constraints

- 1 <= N <= 10^15

Output Format

Output the value of divSum modulo 1000000007.

Sample Input 0

```
4
```

Sample Output 0

```
23
```

Explanation 0

DIV(1,1) = 1, DIV(1,2) = 1, DIV(1,3) = 1, DIV(1,4) = 1

DIV(2,2) = 3, DIV(2,3) = 1, DIV(2,4) = 3

DIV(3,3) = 4, DIV(3,4) = 1

DIV(4,4) = 7

sum = 1+1+1+1+3+1+3+4+1+7 = 23