

## Problem B

For given  $n$  ( $n \leq 10^7$ ), determine the sum of the greatest common divisors of pairs of integers  $(a, b)$  such that  $1 \leq a, b \leq n$ .

### Input and output

The input consists of a single integer  $n$ , the output of a single integer, the value of the sum described above.

### Example

Input:

100

Output:

31080