

## A. LCM Challenge

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Some days ago, I learned the concept of LCM (least common multiple). I've played with it for several times and I want to make a big number with it.

But I also don't want to use many numbers, so I'll choose three positive integers (they don't have to be distinct) which are not greater than  $n$ . Can you help me to find the maximum possible least common multiple of these three integers?

### Input

The first line contains an integer  $n$  ( $1 \leq n \leq 10^6$ ) — the  $n$  mentioned in the statement.

### Output

Print a single integer — the maximum possible LCM of three not necessarily distinct positive integers that are not greater than  $n$ .

### Examples

input
9
output
504

input
7
output
210

### Note

The least common multiple of some positive integers is the least positive integer which is multiple for each of them.

The result may become very large, 32-bit integer won't be enough. So using 64-bit integers is recommended.

For the last example, we can chose numbers 7, 6, 5 and the LCM of them is  $7 \cdot 6 \cdot 5 = 210$ . It is the maximum value we can get.