

C. Beautiful Set

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

We'll call a set of positive integers a beautiful if the following condition fulfills: for any prime p , if a contains a number divisible by p , then at least half of numbers from the set is divisible by p . In other words, if one number from the set is divisible by prime p , then at least half of numbers from the set is divisible by p .

Your task is to find any beautiful set, where the number of elements is equal to k and each element doesn't exceed $2k^2$.

Input

The first line contains integer k ($10 \leq k \leq 5000$) that shows how many numbers the required beautiful set should have.

Output

In the first line print k space-separated integers that are a beautiful set. If there are multiple such sets, you are allowed to print any of them.

Examples

input
10
output
16 18 24 27 36 48 54 72 108 144