E. 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 , then . 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 $(10 \le k \le 5000)$ 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