Problem A. Extended Twin Composite Number

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Do you know the twin prime conjecture? Two primes a and b are called twin primes if $a + 2 = b$. The twin prime conjecture is an unsolved problem in mathematics, which asks for a proof or a disproof for the statement "there are infinitely many twin primes".

On April 17, 2013, Yitang Zhang announced a proof that for some integer c that is less than 70 million, there are infinitely many pairs of primes that differ by c. As of April 14, 2014, one year after Zhang's announcement, the bound has been reduced to 246. People are hoping for the bound to be smaller and smaller, so that a proof for the conjecture can finally be found.

For our dear contestants, we've prepared another similar problem for you, which is the extended twin composite number problem: Given a positive integer n, find two integers x and y such that $x + n = y$ and both x and y are composite numbers.

Input

There are multiple test cases. The first line of the input contains an integer T (about 10^5), indicating the number of test cases. For each test case:

The only line contains one integer n ($1 \leq n \leq 10^9$).

Output

For each test case output two integers in one line, indicating x and y where $1 \leq x, y \leq 10^{18}$. If there are multiple valid answers, you can print any of them; If there is no valid answer, output "-1" (without quotes) instead.

Example

standard input	standard output
3 11 1805296 5567765	4 15 114514 1919810 111234 5678999