

Sachin Loves Boundaries

Sachin loves to hit boundaries. His lucky digits are 4 and 6. A lucky number is one which has its last digit lucky. 144, 124, 156 are lucky numbers while 111, 123, 667, 249 are not lucky. Given a number he wants to find the minimum of summands which are lucky numbers, necessary to produce a sum equal to the given number.

If not possible, print -1.

INPUT:

Each file will consist of a number of test cases T. Each test case will consist of only one number N in one line.

OUTPUT:

Print the least number of lucky summands as given in the question. If not possible, print -1.

Constraints:

$T \leq 100000$ (10^5)

$N \leq 10^{18}$

Time limit:

1 sec for each file.

Example:

Input:

1

10

Output:

2

Explanation:

For the first case:

$10 = 6 + 4$. So, we need only two lucky numbers.