# Sherlock and The Beast

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Sherlock Holmes suspects his archenemy, Professor Moriarty, is once again plotting something diabolical. Sherlock's companion, Dr. Watson, suggests Moriarty may be responsible for MI6's recent issues with their supercomputer, *The Beast*.

Shortly after resolving to investigate, Sherlock receives a note from Moriarty boasting about infecting *The Beast* with a virus; however, he also gives him a clue—a number, $N$. Sherlock determines the key to removing the virus is to find the largest *Decent Number* having $N$ digits.

A *Decent Number* has the following properties:

1. Its digits can only be *3*'s and/or *5*'s.
2. The number of *3*'s it contains is divisible by *5*.
3. The number of *5*'s it contains is divisible by *3*.
4. If there are more than one such number, we pick the largest one.

Moriarty's virus shows a clock counting down to *The Beast*'s destruction, and time is running out fast. Your task is to help Sherlock find the key before *The Beast* is destroyed!

**Constraints**
$1 \leq T \leq 20$
$1 \leq N \leq 100000$

**Input Format**

The first line is an integer, $T$, denoting the number of test cases.

The $T$ subsequent lines each contain an integer, $N$, detailing the number of digits in the number.

**Output Format**

Print the largest Decent Number having $N$ digits; if no such number exists, tell Sherlock by printing **-1**.

**Sample Input**

```
4
1
3
5
11
```

**Sample Output**

```
-1
555
33333
55555533333
```

**Explanation**

For $N = 1$, there is no decent number having $1$ digit (so we print $-1$).
For $N = 3$, $555$ is the only possible number. The number $5$ appears three times in this number, so our count of $5$'s is evenly divisible by $3$ (*Decent Number Property 3*).
For $N = 5$, $33333$ is the only possible number. The number $3$ appears five times in this number, so our count of $3$'s is evenly divisible by $5$ (*Decent Number Property 2*).
For $N = 11$, $55555533333$ and all permutations of these digits are valid numbers; among them, the given number is the largest one.



Current Buffer (saved locally, editable) Java 7

```
import java.io.*;
import java.util.*;
import java.text.*;
import java.math.*;
import java.util.regex.*;

public class Solution {

    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        int t = in.nextInt();
        for(int a0 = 0; a0 < t; a0++){
            int n = in.nextInt();
        }
    }
}

```

Line: 1 Col: 1