Task 06: **Rebel Scum? More like Rebel *Sum*!**

[100 points]

Members of the Rebel Alliance receive top-secret messages from HQ when out on missions. In order to protect against fake messages sent out by the Empire masquerading as the Rebel HQ, every genuine Rebel Alliance message has a unique serial code. The serial code adds up to a "Rebel Sum." The "Rebel Sum" of a serial code is the sum of each digit in an *even or zeroth* position to and twice each digit in an *odd* position. If doubling a digit in an odd position results in a two-digit number, those two digits are summed to form a single digit (see sample input). If the final sum is even, then it is a valid *Rebel Sum*.

Problem Statement

Determine if the serial code of a given message is a valid Rebel Sum.

Input Format

The first line contains `T`, which denotes the number of test cases. This is followed by `T` lines, each containing `N`, the nonnegative integer serial number of the message.

Output Format

For every input `T`, output `"true"` if the serial number is a valid "Rebel Sum" or `"false"` if it is not.

Sample Input

```
4
135         // 1 + 6 + 5 = 12
185         // 1 + (1+6) + 5 = 13
2679        // 2 + (1+2) + 7 + (1+8) = 21
3517        // 3 + (1+0) + 1 + (1+4) = 10
```

Sample Output

```
true
false
false
true
```