Technical Test:

Musaei is a new species that has been recently discovered. What is interesting about this specie is that their reproduction follows a peculiar formula M(t), where M(t) is the number of Musaei's at a specific time t:

At time 0 the population of Musaei's was 1:

$$M(0) = 1$$

At time 1 the population of Musaei's was still 1:

$$M(1) = 1$$

So we introduced an additional Musaei to start the reproduction cycle at time 2, so:

$$M(2) = 2$$

From that time forward, the Musaei's population can be accurately forecasted per the following two formulas:

$M(2t) = M(t) + M(t + 1) + t$ (for t > 1)

$M(2t + 1) = M(t - 1) + M(t) + 1$ (for t >= 1)

Write a function **Musaei(q)** in JavaScript that given a positive integer **q**, not greater than 10^19, it returns the <u>last time</u> **t** that the Musaei's populace will be equal to that number **q**.

If there no such amount q, then return "Never".

PS: Record the Musaei(t) function execution time: difference of time at the beginning of the function and end of the function; the script should not timeout for any of the use cases.

<u>Examples input and output:</u>

- Input q: 4
- Output t: 5
- Execution time: 0.19 milliseconds

- Input q: 15
- Output t: 8
- Execution time: 0.21 milliseconds

- Input q: 22

- Output t: 17
- Execution time: 0.25 milliseconds

- Input q: 100
- Output t: Never
- Execution time: 0.52 milliseconds

- Input q: 8123
- Output t: 2453
- Execution time: 1.21 milliseconds

- Input q: 1000006
- Output t: 186468
- Execution time: 1.62 milliseconds

- Input q: 79537088
- Output t: 12499999
- Execution time: 5.23 milliseconds

- Input q: 999999993
- Output t: 130377746
- Execution time: 5.885 milliseconds

- Input q: 10000000000000000000
- Output t: Never
- Execution time: 32.27 milliseconds