think of a Number
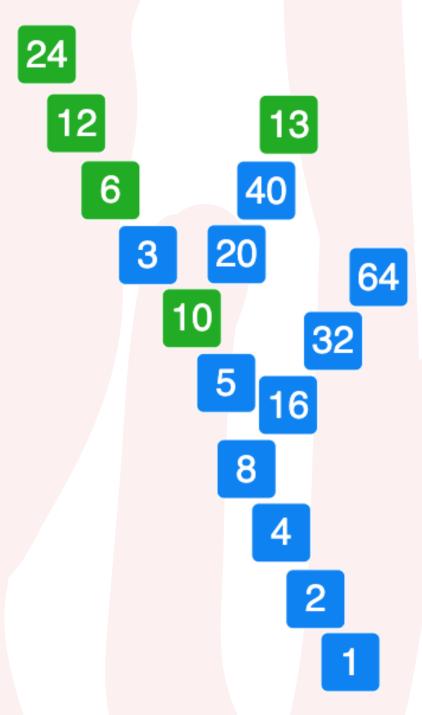
IF IT IS
ODD

IF IT IS
EVEN

× 3 + 1

÷2

...and repeat until you reach a loop!

Create number chains using the given rule.
What do you notice?
What do you wonder?

Find two numbers with stopping time 5.

Which number less than 10 has the largest stopping time?

24
12
6
3
10
5
8
4
2
1
13
40
20
64
32
16

Mathematicians believe that if you start with any positive integer, you'll always end up in the loop of 4– 2-1.
This is called the infamous

Collatz conjecture

Even though every number that's ever been tried ends up in that loop, nobody is 100% sure that it's always true.
That's why despite all the attention,
It's still just a conjecture.

scan to explore more