

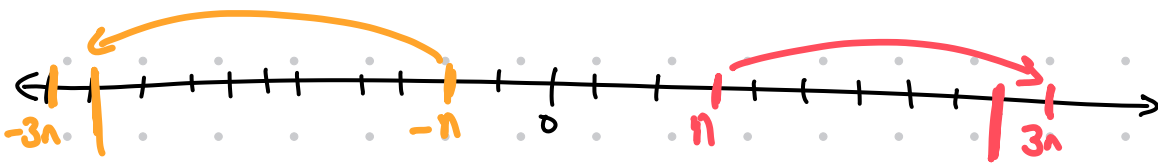
13 March 2024

Veritasium video on the Collatz conjecture:

- What did you learn?
- What questions do you have?

Collatz function: $3n+1$ if n is odd

Today: instead use $3n-1$ if n is odd



$-3n+1$

Apply $3n+1$ function to
negative integers

Apply $3n-1$ to positive integers

SAME by symmetry!

$3n-1$ cycles: 5, 14, 7, 20, 10

17, 50, 25, ..., 34

2, 1

IDEA: compute iterated values until
we find a repeated value