Collatz conjecture:

Consider the following rules (applied to an integer n):

- if $n == 1$, stop.
- if n is even, divide it by 2
- if n is odd, multiply it by 3 and add 1.

Question: does the resulting sequence always stop, no matter where you begin?

E.g., start w/ $n = 3$.

$$3 \longrightarrow 10 \longrightarrow 5 \longrightarrow 16 \longrightarrow 8 \longrightarrow 4 \longrightarrow 2 \longrightarrow 1$$

$$16 = 2^4$$