Collatz Function: $\text{Col}(n) = \begin{cases} 3n+1 & \text{if } n \text{ is odd} \\ \frac{n}{2} & \text{if } n \text{ is even} \end{cases}$

Examples: $\text{Col}(5) = 16,$ $\text{Col}(100) = 50,$ $\text{Col}(37) = 112$

Iterate: $5 \rightarrow 16 \rightarrow 8 \rightarrow 4 \rightarrow 2 \rightarrow 1$

What do you observe?
What do you wonder?

Characteristics of a good mathematical question:

1. The question is interesting to you.
2. You don't already know the answer to the question.
3. You haven't seen the question before, or at least not exactly
4. You can begin computational investigations to shed light on the question.

Collatz Conjecture: For any positive starting integer n, the sequence of Collatz iterates eventually reaches 1.