Recursive Sequences in Functions

Today's Standard

HSF.IF.A3 - Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. For example, the Fibonacci sequence is defined recursively by $f(0) = f(1) = 1$, $f(n+1) = f(n) + f(n-1)$ for $n \geq 1$.

Real-World Applications for this Standard

Modeling population growth; Predicting financial investments; Analyzing computer algorithms; Understanding biological patterns; Creating fractal art

Today I Learned

Today, I learned about sequences in math. These are lists of numbers that follow a special rule. Some sequences are called 'recursive' because each number depends on the ones before it. One famous example is the Fibonacci sequence.

Common Stumbling Blocks

Some kids might think all sequences are the same, but they can be different. Another tricky part is thinking that recursive sequences are always hard, but some, like the Fibonacci sequence, are easy once you understand the rule.

Quiz Me

- What is a sequence?
- Can you name a famous sequence?
- How does the Fibonacci sequence start?
- What makes a sequence recursive?
- Why are sequences important?

Help Me

Sequences are lists of numbers that follow a rule. In real life, we use them to predict things like population growth or how money grows in a bank. Understanding sequences helps us solve problems and see patterns.