

Day 5 (July 3, 2017)

Your reflections on the math we've been doing together:

- How to convert recursive rules into closed forms, how the starting numbers related to the rules.
- Excited about if there are more than two-term recursive rules. Can recursive rules have solutions that are different than exponential?
- Renewed appreciation for matrix multiplication and why it works.
- What about the sum of three previous terms???
- How do these patterns and relationships also apply to non-exponential sequences?
- Environment and structure that led us to find Binet's formula for the Fibonacci sequence.
- What would happen if the bases of the closed form were imaginary??? Dun dun dun!!!
- Great ideas for matrix multiplication with applications.
- Why does all this work the way it does?
- Can you write the sum of two exponential functions as a single exponential function?
- Ratio of consecutive terms--that approaches the more "dominant" base as n increases and the other as n decreases.
- How the matrix stuff relates to the Fibonacci stuff? X2
- Feel good about the process, but can we unpack why that worked?
- What happens if you have a recursive relation that involves the three previous terms? Like $2^n + 3^n + 5^n$? oooooooooooooooooOoO
- How number patterns can motivate algebraic discovery and sense of wonder -- how to do similar things in our own classrooms?
- Connections to many areas of math: quadratics, systems of eqs, ...