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Abstract

Sury's 2014 proof of an identity for Fibonacci and Lucas numbers (Identity 236 of Benjamin and Quinn's 2003 book: *Proofs that Count: The Art of Combinatorial Proof*) has excited a lot of comment. We give an alternate, telescoping, proof of this, and associated, identities and generalize them. We also give analogous identities for other sequences that satisfy a three-term recurrence relation.