

PROBLEM OF THE WEEK 13

Due Wednesday, January 16 at 5:00 pm

Question. Let F_n be the Fibonacci sequence with $F_0 = 0$, $F_1 = 1$ and $F_n = F_{n-1} + F_{n-2}$ for all $n \geq 2$. Prove the following identity for all $n \geq 0$.

$$\sum_{k=0}^n \binom{n}{k} F_k = F_{2n}.$$

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- All answers should be clearly explained. Submit it to the Math/Stat Office, AMB 107.
 - If your instructor gives you credit for POTW, write his/her name with the class number.
 - Contact Bahattin Yildiz with questions: bahattin.yildiz@nau.edu (AMB 134)
 - The problems are available online at <https://naumathstat.github.io/problem-of-the-week/>