

**MATH 113: DISCRETE STRUCTURES  
HOMEWORK DUE MONDAY WEEK 7**

*Problem 1.* Prove that

$$F_{2n+1} = 3F_{2n-1} - F_{2n-3}$$

for  $n \geq 1$ . (This gives us a way to compute Fibonacci numbers of odd index without computing those with even index!)

*Problem 2.* DM:EB 4.2.8.