



INTRO TO ABSTRACT MATHEMATICS  
SPRING 2020

ASSIGNMENT 10.1  
DUE APRIL 15

**Exercise 1.** Textbook exercise 6.4.5. [*Suggestion:* Use recursive induction with  $k = 3$ .]

**Exercise 2.** Textbook exercise 6.4.6. [*Suggestion:* If  $x + 1/x = m$  and  $a_n = x^n + 1/x^n$  for  $n \geq 1$ , show that  $a_{n+1} = ma_n - a_{n-1}$  for  $n \geq 2$ . Then induct.]