

**MATH 113: DISCRETE STRUCTURES**  
**READING QUESTIONS FOR FRIDAY WEEK 6**

*Problem 1.* There is a handy rule of thumb for converting between miles and kilometers which uses the Fibonacci numbers:  $F_n$  miles is approximately  $F_{n+1}$  kilometers. Indeed, 3 miles is about 5 kilometers, and 5 miles is about 8 kilometers, *etc.* Why is this true? (*Hint:* What is the ratio between consecutive Fibonacci numbers as  $n \rightarrow \infty$ ?)