Math 324/524 Homework 5
Due 10/9/2019

1. Section 2.2 Exercise 66
2. Let $A = \begin{bmatrix} 1 & 1 \\ 0 & 1 \end{bmatrix}$.
   (a) Experimentally (using a computer/calculator) determine a formula for $A^n$.
   (b) Prove the formula using mathematical induction.
3. Appendix Exercise 10
4. Use contradiction to prove the statement:
   The equation $x^2 = 4y + 3$ has no integer solutions.
5. What is the contrapositive, converse, inverse, and negation of the statement:
   If $A$ is a nonsingular matrix of order $n$ then $A$ is row equivalent to $I_n$.