Due March 8th, in class

Problems to Turn In:

1. [IPM10e] Exercise 10.4

2. Let \( \{B(t), \ t \geq 0\} \) denote a standard Brownian motion. Find the following probabilities. Give your answers as rational numbers or decimals to at least three places.
   (a) \( B(2) > 2 \)
   (b) \( B(2) > B(1) \)
   (c) \( B(2) > B(1) > B(3) \)
   (d) \( B(t) < 4 \) for all \( t \) with \( 0 < t < 3 \)
   (e) \( B(2) > 0 \) given \( B(1) > 0 \). Are the events \( \{B(1) > 0\} \) and \( \{B(2) > 0\} \) independent?

Readings: [IPM10e] Section 10.1, 10.2 (p.631-636)

Self-Study Problems: (Do Not Turn In)

1. [IPM10e] Exercise 10.10 (See Section 10.3.1 for the definition of Brownian Motion with drift and p.769-770 for solutions)