

# STAT 405-01: Mathematical Statistics I

## Problem Set 12

Assigned 2013 December 3  
Due 2013 December 10

**Show your work on all problems!** Be sure to give credit to any collaborators, or outside sources used in solving the problems. Note that if using an outside source to do a calculation, you should use it as a reference for the method, and actually carry out the calculation yourself; it's not sufficient to quote the results of a calculation contained in an outside source.

### 1 Hogg 5.2.11

[Do **NOT** use the central limit theorem to show this.–JTW]

### 2 Hogg 5.2.14

### 3 Hogg 5.2.20

### 4 Hogg 5.3.4

### 5 Hogg 5.3.7

### 6 Hogg 5.3.13