## Homework 6

## Section 4.1 in Casella and Berger Book

Book problems: 4.1, 4.1d: $\mathrm{P}(\operatorname{abs}(\mathrm{X}+\mathrm{Y})<1), 4.4,4.5$

## Section 4.2 in Casella and Berger Book

Book problems: 4.7, 4.9 (assume $X$ and $Y$ are continuous and the intervals of ( $a, b$ ) and ( $\mathrm{c}, \mathrm{d}$ ) fall on the real number line), 4.10, 4.11, 4.12 (Hint: Assume stick is of length 1, and note that to create a triangle you either need (i) the sum of the length of any 2 segments to be greater than the length of the $3^{\text {rd }}$ segment or, (ii) no segment length is greater than $1 / 2$ ), 4.13

