

STAT 611 FALL 2011

HW4

DUE THURSDAY, OCTOBER 13

1. SUPPOSE S IS A VECTOR SPACE

IN \mathbb{R}^n . PROVE $(S^\perp)^\perp = S$.

2. PROVE THE RESULT DISPLAYED IN PROBLEM 2.2 ASSUMING $A_{p \times p}$ IS A SYMMETRIC MATRIX. THE TEXT SUGGESTS A CALCULUS BASED STRATEGY, BUT I WOULD LIKE YOU TO PROVE THIS WITHOUT CALCULUS.

3. FROM THE TEXT, COMPLETE PROBLEMS 2.3, 2.21, 3.1, 3.2, 3.4, 3.7, 3.22.