

Homework 6
MATH 166 - Spring 2023
Tufts University, Department of Mathematics
Instructor: James M. Murphy
Due: March 9, 2023

1. BOOK QUESTIONS

Wasserman: Chapter 10: #5, #7 a), #12

SUPPLEMENTAL QUESTION 1 (WALD TEST NUMERICS)

Suppose we sample x_1, \dots, x_n i.i.d. from $\mathcal{N}(0, 1)$. Let $H_0 : \mu = 0$, $H_1 : \mu \neq 0$. Let $n = 100$. Simulate $T = 10000$ trials of sampling and running a Wald test at the $\alpha = .01$ level. How many times do you reject H_0 ? Interpret this in terms of Type I errors and the meaning of significance level.