

Homework 1 - Due Friday, August 31

Do Problems 7.10, 7.13, 7.14, 7.20b, 7.35, 7.38, 7.42, 7.52 and the problem below.

Homework should be written neatly and clearly explained. If it requires more than one sheet, the sheets must be stapled. Include your name and id number in the top right corner of your homework.

**Problem 1.** Let  $T_1, T_2, T_3$  be t-distributed random variables. Assume  $T_1$  has 2 degrees freedom,  $T_2$  has 4 degrees freedom, and  $T_3$  has 5 degrees freedom.

1. What is the probability that  $|T_1| \leq 1.886$ ?
2. What is the probability that  $T_2 \geq 2.776$ ?
3. What is the probability that  $T_3 \geq 1$ ?