MATH 185 – Homework 6
Due Wednesday, 05/23, by 11:59 PM

Send your code here. For Homework 1, write "MATH 185 - HW 1" *in subject line and nothing else in the body. There should only be one file attached, with the name* hw1-lastname-firstname.R. *Make sure your code is clean, commented and running. Keep your code simple, using packages only if really necessary. If your code does not run, include an explanation of what is going on.*

Problem 1. (Rank Honest Significant Differences.) Propose a rank-based multiple testing procedure for comparing all group pairs in a one-way design that is analogous to the honest significant differences of Tukey. Start by briefly explaining (as a comment) the main idea, and then implement your function, calling it rankHSD(y, g, B = 999). Try your function on the smokers dataset.

Problem 2. (Hoeffding test for independence.) Write a function hoeff.test(x, y, B = 999) implementing the Hoeffding test for independence.

Problem 3. (Kevin Durant and Steph Curry.) Kevin Durant and Steph Curry are the two stars of the Golden State Warriors, an NBA team based in Oakland, California. We may want to know whether the points they score in each game are associated or not. We will focus on the regular 2016-17 season. (That season, the team won the NBA Championship.) Enter the points they each scored in the *regular season* games, which are available here and here. (You might have to do so by hand, although it should only take a couple of minutes.) Apply the Spearman test and then the Hoeffding test (implemented in Problem 2). Repeat, ignoring games where either one of them was not playing (which can be identified by a score of 0).