

Section 11.2 HW Guide

Problem 1

Part a: Open the data set in StatCrunch.

Subtract the columns in StatCrunch. Data > Compute > Expression. Click Build. Select Xi and Add Column, type a minus sign, select Yi and Add Column. Okay. Compute.

Part b: To find the mean (\bar{d}) and standard deviation (sd), compute those statistics using Stat > Summary Stats > Columns.

Part c: Select the correct null and alternative hypotheses. Keep in mind that the null hypothesis must contain equality.

Compute the P-value using StatCrunch. Stat > T Stats > Paired. Select Xi for Sample 1 and Yi for Sample 2. Select the correct sign for the alternative hypothesis. Compute. (By the way, you can save the differences rather than subtracting using Data > Compute > Expression).

Choose the right decision/conclusion based on your p-value.

Part d: To construct the interval, follow the same steps as for the P-value except select the confidence interval option instead.

Problem 2: Understanding matched pairs, Hypothesis test, Confidence interval, Boxplot of differences

Problem 3: Similar to 2 but no confidence interval

Problem 4: Hypothesis test

Problem 5 & 6: Confidence interval -> conclusion