Name _____

Student Number _____

STA 441s 2024 Quiz 2

These questions are all based on your analysis of the the Furnace data.

1. (2 points) How many houses have forced air furnaces? The answer is a number from your printout. Write the number in the space below. on the printout, circle the number and write "Question 1" beside it.

2. (4 points) We want to know whether amount of energy consumed is related to whether the vent damper is active or not.

   (a) Give the value of the test statistic (t, chi-square or F.) The answer is a number from your printout. Write the number in the space below. on the printout, circle the number and write "Question 2" beside it.

   (b) Are the results statistically significant at the 0.05 level? Answer Yes or No.

   (c) Do you reject the null hypothesis at $\alpha = 0.05$? Answer Yes or No.

   (d) In plain, non-statistical language, what do you conclude, if anything?

3. (4 points) We want to know whether amount of energy consumed with vent damper active (in) is related to amount of energy consumed with vent damper inactive (out).

   (a) Give the value of the test statistic (r, t, chi-square or F.) The answer is a number from your printout. Write the number in the space below. on the printout, circle the number and write "Question 3" beside it.

   (b) Are the results statistically significant at the 0.05 level? Answer Yes or No.

   (c) Do you reject the null hypothesis at $\alpha = 0.05$? Answer Yes or No.

   (d) In plain, non-statistical language, what do you conclude, if anything?

Attach your log file and your results file to the quiz paper. Make sure your name and student number are written clearly on both printouts.