

Name _____

Student Number _____

University of Toronto Mississauga

STA442/1008 2012

Quiz 3

1. (3 Points) Give the following numbers from your printout.
 - (a) The number of houses with electric vent dampers. (40)
 - (b) The percentage of Ranch houses. (42.22)
 - (c) The mean energy consumption with vent damper active. (10.038)

2. (7 Points) In the furnace study, we want to know whether there a tendency for houses that consume lots of energy with the vent damper out (inactive) to also consume a lot of energy with the vent damper in (active).
 - (a) What is the value of the test statistic? The answer is on the printout. (Three answers are okay: $r = 0.98111$, $F = 2262.95$ and $t = 47.57$)
 - (b) What is the p -value? The answer is on the printout. ($p < .0001$)
 - (c) Do you reject the null hypothesis at the 0.05 level? Answer Yes or No. (Yes)
 - (d) Are the results statistically significant at the 0.05 level? Answer Yes or No. (Yes)
 - (e) In plain, non-technical language, what do you conclude, if anything? Say something about energy consumption and vent dampers. Statistical terminology is *absolutely* not allowed here. This means you get *no marks* if you use words and phrases like “variable” or “null hypothesis” or “negative relationship” or “statistically significant.” (Houses that consume more energy with the vent damper active also (tend to) consume more energy with the vent damper inactive.)

Please turn in your log file and your list file with the quiz. Make sure your name and student number are written on them.