STA442S08 Solutions to Quiz 9

1. (a) $H_0 : \beta_3 = \beta_4 = 0$

   (b) $H_0 : \beta_1 = \beta_2 = 0$

Origin	$E[Y|\mathbf{X}]$
Aboriginal ancestry, born at high altitude	$(\beta_0 + \beta_3) + \beta_1 X_1 + \beta_2 X_2$
Aboriginal ancestry, born at low altitude	$(\beta_0 + \beta_4) + \beta_1 X_1 + \beta_2 X_2$
Hispanic ancestry, born at low altitude	$\beta_0 + \beta_1 X_1 + \beta_2 X_2$

   (c) $H_0 : \beta_4 = 0$

   (d) $H_0 : \beta_4 = \beta_3$

   (e) $H_0 : \beta_0 = \frac{(\beta_0 + \beta_3) + (\beta_0 + \beta_4)}{2}$ or $H_0 : \beta_3 + \beta_4 = 0$

2. (a) $F = 1.42$ or $t = 1.19$, No

   (b) $F = 0.00$ or $t = 0.00$, No (0 means exactly zero but 0.00 means zero approximately up to two decimal places)

   (c) $F = 0.90$, No

   (d) $F = 49.04$ or $t = 7.00$, Yes

   (e) When you allow for the location of the house and the assessed value of the home, average number of TV sets in the household is expected to be *higher* ($b_2 > 0$ implying that the relationship is positive) for household with more people living in it.

You get zero for the *second* question if

- you didn't hand in both .log and .lst files;

- there were no date and time on the files;

- the date and time on .log and .lst files were not the same;

- you used other's account to produce the files;

- there were errors in your .log file or;

- there were warnings in your .log file.

You are *strongly* recommended to use SAS on tuzo.