

STA442S08 Solutions to Quiz 8

1. Dependent variable = *growth*, the three independent variables are:

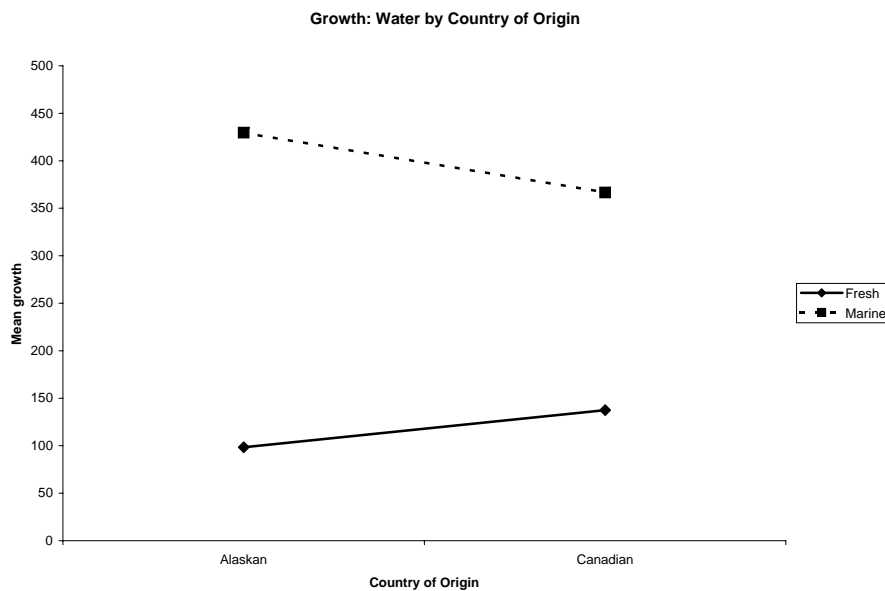
Factor	Levels	Between or Within
<i>Water</i>	1- <i>Fresh</i> , 2- <i>Marine</i>	Within
<i>Country</i>	1- <i>Alaskan</i> , 2- <i>Canadian</i>	Between
<i>Gender</i>	1- <i>Female</i> , 2- <i>Male</i>	Between

Note that *Water* and *Country* are the two significant main effects and the significant interaction effect is the interaction between *Water* and *Country*.

- (a) We should interpret the *Water* main effect as the means for *Marine* are always above the means for *Fresh* regardless of the country of origin. It is found that salmons have greater average marine growth.

We should not interpret the *Country* main effect as we have different interpretation for different level of *Water* (interaction effect).

- (b) Averaging across Male and Female, Canadian salmons have greater average freshwater growth, and Alaskan salmons have greater average marine growth.
- (c)



2. (a) $F = 55.80$
(b) Yes.
(c) Average number of correct answers depends on the loudness of distraction.

You get zero for the *first* question if

- you didn't hand in the plot of the means;
- your plot was incorrect or;
- your plot was not nicely labelled.

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.