Quiz#3 Homework #17 **data→ 942_q3h17_152.sav**

1. Multiple regression

   a. Data preparation

- Mean center the quantitative variables (pract, priorexp & motiv)
- Dummy code probtopic so that "familiar" is the contrast group (=0)
- Dummy code priorgrad so that "no" is the contrast group (=0)
- Compute the following 2-way interaction terms
  - o pract with priorgrad, motiv & probtopic
  - o priorgrad with priorexp, probtopic & motiv

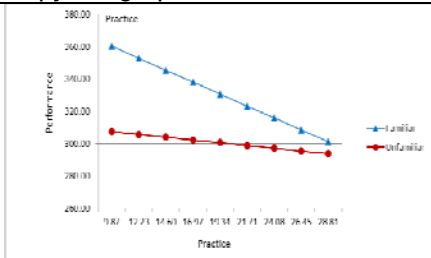
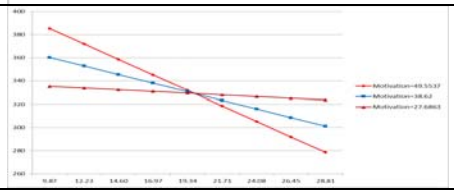
R^2 .856 F 20.503 df 11, 38 p .000

   b. Obtain and interpret each of the regression weights from the model. Be sure to give a "behavioral interpretation".

The comparison group has practiced 19.34 times, has 86.38 prior experience, 38.62 motivation score, is **familiar**/unfamiliar with the topic used in the exam question, and has/**has not** had prior grad stats class(es).

	b
Constant	330.689
pract	-3.117
priorexp	.102
motiv	.109
probtopic	-30.122
priorgrad	32.062
pract*priorgrad	2.123
pract*motiv	-.230
pract*probtopic	2.390
priorgrad*priorexp	-.895
priorgrad*probtopic	-15.771
priorgrad*motiv	-.593

   c. Each of the following plots using the "Plotting_2way_143" xls program. For all all of these plots:

Plot to get	Copy the graph here
Use the "2xQ linear" tab to plot the probtopic * practice interaction	
Use the "QxQ linear" tab to plot the pract (on the x-axis) * motiv interaction	

GLM/UNIANOVA

EMMEANS results:

Familiarity with topic used in the exam problem

720 mean difference 38.007 p .000

Prior graduate stats class(es)

mean difference 24.176 p .001

Familiarity with topic * Prior grad stats Interaction

For those who have had prior grad stats class(es)

mean difference 45.893 p .000

For those who have not had prior grad stats class(es)

mean difference 30.122 p .000