Biology 4605/7220
28 October 2011 Worksheet for Exam 2 Part 1

For the following tests list the number of ratio scale explanatory variables, the number of nominal scale explanatory variables (factors), and the number of interaction terms.
Write a GLM with df below each term.

	Ratio	Factors	Interaction
1. Oneway ANOVA comparing hematocrit in 3 treated groups and one control group. N = 10 in each group.	___0__	___1____	___0____

df total = (10*4) - 1
39 = 1 + 38

2. Twoway ANOVA for BACI design (before / after at control and impacted sites, in environmental assessment). N = 4 measurements at control before impact, 4 at impacted before impact, then 4 more at control and impact site after impact.	___0__	___2____	____1___

df total = (4*4) - 1
15 = 1 + 1 + 1 + 12

3. Paired comparison of reaction times in 30 subjects, before and after alcohol intake.	___0__	___2____	____0___

df total = (2*30) - 1
59 = 1 + 29 + 29

4. Carpal tunnel symptom severity with and without surgery, in 4 different hospitals (ntotal = 32)	___0__	___2____	____1___

df total = 32 - 1
31 = 1 + 3 + 3 + 24

5. Regression analysis of growth rates in 25 babies as a function of birth weight	___1__	___0____	____0___

df total = 25 - 1
24 = 1 + 23