Biology 4605/7220
28 Oct 2010, 3 Nov 2017, 31 Oct 2018 Worksheet for Exam 2 Part 2

For the following analyses list the number of regression (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.

	Regression	Factors	Interaction
1. Heart rate of 30 marathon runners compared to 20 sprint runners, controlled for body size (weight)	_____	_____	_____

GLM: _____ =
df:

2. Regression analysis of number of babies delivered per year in 17 European countries, as a function of number of storks and land area (Matthews A.J. 2000. Storks deliver babies p = 0.008. *Teaching Statistics* 2:36-38).	_____	_____	_____

GLM: _____ =
df:

3. Hierarchical ANOVA of wheat yield in two fields on each of 3 farms. Number of observations per field: Farm1 (n=3, 3) Farm2 (n = 3, 4) Farm3 (n = 3,3)	_____	_____	_____

GLM: _____ =
df:

4. Power laws are used to describe the relation of lobster egg number to size (carapace length). Compare power laws for lobsters from Virginia (n=10) , Maine (n = 11), Nova Scotia (n = 10), and Newfoundland (n =10).	_____	_____	_____

GLM: _____ =
df:

5. With the bicycle ECG stress test, does maximum power output by male and female patients depend on whether the investigator is male or female? ntotal = 27	_____	_____	_____

GLM: _____ =
df:

6. Do the results for the analysis above differ among cardiac units (different hospitals)? ntotal = 81 [challenging!]	_____	_____	_____

GLM: _____ =
df: