Biology 4605 / 7220   Name _____
Quiz #10a   20 November 2007

1. In an experiment on peas, Mendel obtained the following results from a dihybrid cross.
Fill in the five blanks. $G = 2 \Sigma \ln L$

	Observed	Theory	Expected		
	f		fhat	f/fhat	lnL
Round Yellow	315	9			
Round Green	108	3	104.25	_____	
Wrinkled Yellow	101	3	104.25		_____
Wrinkled Green	32	1	_____		
Total	____	___			

2. For the following data situations, state whether regression or correlation is appropriate,
and then state why. State whether the coefficient (β for regression, r for correlation) is
expected to be positive, negative, or unknown.

a. A biochemist is interested in the relation of three different anions in a solution.

    Corr/regr _____   Why?   +/−/unknown_____

b. An epidemiologist is interested in whether cancer rates depend on age.

    Corr/regr _____   Why?   +/−/unknown_____

c. A botanist is interested in tree age and the number of trees per hectare.

    Corr/regr _____   Why?   +/−/unknown_____

3. In a prospective study, an ichthyologist finds that the odds of recapture of a species of
fish drop from 2:1 at site A, down to 1.4:1 at site B.

        Compute the odds ratio (odds at A / odds at B)   OR_____

        Obtain the parameter β where OR= e^{β} $\beta =$ _____