Biology 4605 / 7220 Name _____
Quiz #5a 18 October 2007

1. A conservation biologist compared nesting success (Nprod) of an endangered species of bird in 20 nests, of which 10 were protected from predatory rats and 10 left untouched as controls. Define the explanatory variable and assign it a symbol. [1]

Write a general linear model to analyze the effects of predator removal on nesting success. [3]

Beneath each term in the model show the df. [3]

2. The following table shows the observed or projected number of people alive at ages 20 through 60, from a cohort of 100,000 people born in decades from 1920 to the present (data from Stats Canada, updated 12 July 2007).

Decade of Birth	Number alive at each age, out of 100,000				
	age 20	age 30	age 40	age 50	age 60
1920-29	83669	80437	76798	71788	63328
1930-39	87886	85337	82125	77390	68643
1940-49	91758	89885	87480	83094	74187
1950-59	94831	93626	91977	88312	79731
1960-69	96306	95221	93779	90422	82321
1970-79	97343	96275	94931	91756	84250
1980-89	98341	97498	96457	94093	87987
1990-99	98835	98111	97065	95005	89963
2000-04	99034	98440	97597	95768	91367

2. What proportion of people born in 1947 are alive today? _____[1]
What are the odds of reaching age 60, for this cohort ? _____[1]

Given your birth year, what are your odds of reaching age 60 ? _____[1]

3. Complete the following ANOVA table, for the regression of ln Odds against birth decade. [2]

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3.113903		1341.691	2.94E-09
Residual	7		0.002321		
Total	8	3.13015			