

1. For the following analyses, list the type of response variable (binomial or ratio scale), the number of ratio-scale explanatory variables, and the number of nominal scale (categorical) explanatory variables. Number = 0 if absent.

	Response	Ratio-scale	Categorical
ANCOVA.	_____	_____	_____
Species diversity in logged and unlogged plots of tropical rain forest.	_____	_____	_____
Multiple regression.	_____	_____	_____
Sex ratio in small versus large slipper limpets.	_____	_____	_____
Paired t-test.	_____	_____	_____
Analysis of parasite load in 4 species of fish, controlled for body size.	_____	_____	_____
Recapture numbers after release of 10, 6, 5 caribou respectively in 3 herds of caribou.	_____	_____	_____

2a. Assuming a probability of recapture of  $p_{\text{recap}} = 0.5$  in each herd, calculate the expected number of recaptures  $E(N_{\text{recap}}) = (p_{\text{recap}})(N_{\text{release}})$  and observed odds.

Herd:	GR	JR	LR
$N_{\text{release}}$	<u>10</u>	<u>6</u>	<u>5</u>
$E(N_{\text{recap}})$	_____	_____	_____
$N_{\text{recap}}$	<u>4</u>	<u>2</u>	<u>1</u>
Odds	_____	_____	_____

2b. Define response and explanatory variables, with symbols, to test whether recapture rate (odds of recapture) are the same in all three herds.

2c. Using symbols above, write a model to test whether the recapture rate (odds of recapture) are the same in all three herds.