## EEB 590: R & stats — Numbers for factorial ANOVA Philip Dixon, 25 Oct 2016

## Cell and Marginal Means

	Nat	tive		
Island	No	Yes	Mean	Difference
Guam	53.12	56.59	54.85	5.75
Saipan	49.45	48.75	49.10	
Means	51.29	52.67		•
Difference	-1.38		'	

## Tests

P-value for	Analysis				
test of	A	В	$\mathbf{C}$	D	$\mathbf{E}$
Island	0.021	0.029	0.18	0.0197	0.0197
Native	0.54	0.31	0.30	0.57	0.57
I*N	0.39	0.39	0.39	0.39	0.39

Analysis	using:
A	lm, anova Island before Native
В	lm, anova, Native before Island
$\mathbf{C}$	lm, Anova, type=3 in car
D	lm contr.sum(), Anova, type 3
$\mathbf{E}$	lm, Ismeans joint test