**University of California Santa Barbara**

**Department of GEography**

GEOG 210B – Analytical Methods in Geography II **- Winter 2018**

**Assignment 2**: Matrix Linear Regression with R and Diagnostics

(Due February 20, 2018 by 11:59 pm)

**Part 1:** Using the following matrices estimate a linear regression model with Y the dependent variable and X the independent.

|  |  |
| --- | --- |
| X | Y |
|  |  |

Report the coefficients you found and all te intermediary matrices following the example on linear algebra in R from January 25.

**Part 2**: Using the model in Part 3 of your assignment 1, report every statistical test you learned in Geog 210B and explain what it means and what your findings are. For example, which variables are significantly different than zero? Are the error terms more likely to be heretoskedastic? Are the error terms autocorrelated?

Put side by side a model with White’s correction for the standard errors of the coefficient estimates and without and decide if the correction changes your findings about the significance of coefficients.