Principal Components Regression - Worksheet

Part One - ***Give explanation for True/False***

1. *(True/False.)* Since principal components are orthogonal (completely uncorrelated) I can solve the problem of multicollinearity in regression by replacing all my variables with all of the principal components.

2. *(True/False.)* In order to solve the problem of multicollinearity in regression using principal components, I must omit principal components that have eigenvalues close to zero.

3. *(True/False.)* The problem with principal components regression is that you cannot interpret the parameter estimates. This problem cannot be solved.

4. *(True/False.)* Principal components regression is called a biased regression technique because the parameter estimates are biased.

5. Can you determine the amount of bias in a principal components regression model?

6. Why would you have to use principal components regression?

7. What procedure will perform principal components regression and translate the parameter estimates in terms of the original variables?

List of Key Words/Phrases.

principal components regression	multicollinearity
variance inflation (VIF)	small eigenvalues
biased regression	PROC PLS