

HW9 (due on June/5 12:30PM)

Use the PCA analysis to derive $X = V*Z$, where

$$X = \begin{pmatrix} 2 & 2 \\ 0 & -2 \\ 4 & 0 \\ -2 & -2 \end{pmatrix}$$

- 1. Please write down the key steps in the derivation and what V and Z are (40points).**
- 2. How important are V1 and V2 in explaining original X? (30 points)**
- 3. Illustrate that using V and Z you can reconstruct original X (30points)**