

1. Problem 2 of Chapter 6. (p.68) (You may consider \mathbf{A} , \mathbf{B} and \mathbf{C} as vectors. The δ is same as norm, see (1.14)).
2. Problem 1(a) of Chapter 7. (p.77)
3. Problem 3 of Chapter 8. (p.104)
4. Let $\mathbf{I}_{k \times k}$ be the identity matrix, $\mathbf{J}_{k \times k}$ be the matrix of all 1s ($J_{ij} = 1$ for all i, j) and a , b be two constants. Show that under a mild condition, the inverse of $(a - b)\mathbf{I} + b\mathbf{J}$ is also of the form $c\mathbf{I} + d\mathbf{J}$. Find c , d and the condition.

SAS Problems (Please hand in your sas program and list file.)

The dataset for this class is stored at: the course website: datasets

by clicking the data names (blue color). Save them as data files in your directory. This is supposed to be the dataset you get from your client. You need to read the descriptions, but should not modify them in any way.

5. Refer to the DOG1 dataset. Write a SAS program to read the data file from your directory with an INFILE statement and print the dataset. There should be 25 observations and 6 variables.
6. Refer to the BREAD dataset. Write a SAS program to read the data file from your directory with an INFILE statement and print the dataset.