STAT 415/615 Class Work/Lab Matrix Operations

Instructions: Submit to Canvas all required script, R code, and output using an R markdown file and a Word file.

Explanations of matrix notation:

For a given matrix X,

XT means X Transpose X -1 means X inverse

Use and Show R code to perform the indicated Matrix Operations. All matrices are found in the R instructional file for week 3 session 2.

1) Use and show R code to generate the following matricies

a) matrix (A) 10 8 b) matrix (B) 5 3 c) matrix (C) 1 -4 5

5 12 15 6 6 0 -3

d) matrix(D) -3 7 2 e) matrix(E) 1 -4 5 -10 g) matrix(G) -3 7 2 7

3 -2 -10 6 0 -3 6 3 -2 -10 -2

12 5 -11 -4 1 0 5 -10

2) C multiplied by E(Row Column Multiplication)

3) ET

4) E-1

5) DT+ D-1

6) (A-1)T

7) (B-1multiplied by BT)-1