

Last Name: _____

First Name: _____

Student ID: _____

Quiz 3 (B)

Question 1. (4 marks) Use the given information to find A :

$$(3I + 2A^T)^{-1} = \begin{bmatrix} 2 & 2 \\ 3 & 4 \end{bmatrix}$$

Question 2. (4 marks) Circle the elementary matrices. For each elementary matrix state the corresponding operation.

$$\begin{bmatrix} 0 & 0 & 1 \\ 0 & 1 & 0 \\ 1 & 0 & 0 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 0 & 0 & 1 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 2 & 0 & 2 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 1 & 0 \\ 0 & 0 & 1 \\ 0 & 0 & 0 \end{bmatrix}$$

Question 3. (2 marks) Find a nonzero 3×3 matrix such that $A^T = -A$.