Last Name: _____

First Name: _____

Student ID: _____

Quiz 3 (A)

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

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

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

Question 3. *(4 marks)* Circle the elementary matrices. For each elementary matrix state the corresponding operation.

$$\begin{bmatrix} 1 & 1 & 0 \\ 0 & 0 & 1 \\ 0 & 0 & 0 \end{bmatrix} \quad \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 5 \\ 0 & 0 & 1 \end{bmatrix} \quad \begin{bmatrix} 0 & 0 & 1 \\ 0 & 1 & 0 \\ 1 & 0 & 0 \end{bmatrix} \quad \begin{bmatrix} 3 & 0 & 0 & 3 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}$$