

# MATH 335 Quiz 10

Name: \_\_\_\_\_

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Show all work. Can use Matlab to check but show how you got there. 5 points each.

1) Show that  $A^T A$  is symmetric for any matrix  $A$ .

2) Find a an orthogonal diagonalization of  $\begin{bmatrix} 3 & 1 \\ 1 & 3 \end{bmatrix}$ .