

## Chapter 6 Quiz

Use your own paper. Show work. You may use a calculator, books, notes, and you may work in groups with any fellow classmates. While working together, please make sure that everyone understands the concepts being shared.

Quiz is due at 2:30.

1. Find all possible values of the scalar  $\alpha$  that make the matrix  $A$  defective. Show your work.

$$A = \begin{pmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \\ 0 & 0 & \alpha \end{pmatrix}$$

2. Show that the diagonal entries of a Hermitian matrix must be real.