

Name: _____
Student ID #: _____

Mini-Quiz # 12

MAT-022A-Summer Session II (9/6/09)

You have until the start of class on Wednesday 9/9/09 to finish. You may only use a pencil (or pen) and scrap paper.

1. Is the following matrix A diagonalizable and if so find invertible P so that $P^{-1}AP$ is diagonal. (5 points)

$$A = \begin{bmatrix} 3 & 0 & 1 \\ -1 & 2 & -1 \\ 1 & 0 & 3 \end{bmatrix}$$

2. Determine whether or not the following matrix is diagonalizable. If it is diagonalizable find an invertible P so that $P^{-1}AP$ is diagonal. (5 points)

$$A = \begin{bmatrix} 3 & 1 & 1 & -1 \\ 0 & 3 & 1 & 1 \\ 0 & 0 & 3 & 0 \\ 0 & 0 & 0 & 0 \end{bmatrix}$$