

MATH 0280 - Review 3

1. Review 1.
2. Review 2.
3. Show that A and B are not similar matrices:

$$A = \begin{bmatrix} 3 & -1 \\ -5 & 7 \end{bmatrix}, \quad B = \begin{bmatrix} 2 & 1 \\ -4 & 6 \end{bmatrix}.$$

4. Determine whether A is diagonalizable, and if so, find an invertible matrix P and a diagonal matrix D such that $P^{-1}AP = D$.

$$A = \begin{bmatrix} 1 & 0 & 1 \\ 0 & 1 & 1 \\ 1 & 1 & 0 \end{bmatrix}, \quad A = \begin{bmatrix} 1 & 2 & 1 \\ -1 & 0 & 1 \\ 1 & 1 & 0 \end{bmatrix}.$$

5. Section 5.2: 3, 7, 9, 14, 17, 21.
6. Section 5.3: 4, 6, 8, 10, 16, 17.