

Math 3280 Worksheet 15: Diagonalizing systems

Group members (1 to 3): _____

- (1) Find the eigenvalues and eigenvectors for the matrix

$$A = \begin{pmatrix} 7 & -9 \\ 6 & -8 \end{pmatrix}$$

- (2) Form the matrix P using the eigenvectors of A as columns. Find the inverse of P and compute A^2 from the product PD^2P^{-1} where D is the diagonal matrix with the eigenvalues of A on its diagonal.