

Quiz 4

Make sure to check that $AP = PD$ for diagonalizations.

- (5 points) Find a complete set of eigenvectors for $\begin{pmatrix} 9 & -3 \\ 14 & -4 \end{pmatrix}$ and specify the eigenvalues. Diagonalize the matrix if it is diagonalizable, otherwise explain why it is not diagonalizable.

- (5 points) Do the same for $\begin{pmatrix} 3 & 0 & -1 \\ -2 & 4 & -2 \\ -3 & 0 & 1 \end{pmatrix}$.

MATH 54. July 15, 2016. (20 minutes, 10 points)

3. (1 point) Show that $\text{rank } AB \leq \text{rank } A$ and that $\text{rank } AB \leq \text{rank } B$.