

MATH 54 SPRING 2019: DISCUSSION 109/112 QUIZ#4

GSI: CHRISTOPHER EUR, DATE: 3/5/2019

STUDENT NAME: _____

Problem 1. Compute the characteristic polynomial of the following matrix (you do not need to factor it).

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

Problem 2. Let A be a square matrix. Show that if A^2 is the zero matrix, then the only eigenvalue of A is 0.