

**MATH 54 SPRING 2019: DISCUSSION 109/112 QUIZ#2**

GSI: CHRISTOPHER EUR, DATE: 2/12/2019

STUDENT NAME: \_\_\_\_\_

*Problem 1.* (5 points) Determine whether the following matrix  $A$  is invertible

$$A = \begin{bmatrix} 2 & 1 & -1 \\ 3 & 0 & 1 \\ 4 & 1 & 1 \end{bmatrix}$$

*Problem 2.* (5 points) Let  $A$  and  $B$  be matrices such that  $AB$  is well-defined. Show that if the columns of  $B$  are linearly dependent, then so are the columns of  $AB$ .