

MATH 3191 Written Homework 4

____/20 points

Name: _____

Due: February 16th

Show all work that leads to your answers. I will be providing feedback on the work as well as the answers!

1. (20 points) Let

$$A = \begin{bmatrix} 1 & 2 & 3 \\ 3 & 2 & 3 \\ 2 & 2 & 2 \end{bmatrix} \quad \mathbf{b} = \begin{bmatrix} 1 \\ 2 \\ 1 \end{bmatrix}$$

- (a) (10 points) Solve the system $A\mathbf{x} = \mathbf{b}$ using Gaussian Elimination
(b) (10 points) Compute A^{-1} and use this to solve the system $A\mathbf{x} = \mathbf{b}$.