

Math 2210-006/011 Quiz 6

Name: _____

Due: 10/21/19

This is a two-stage quiz. You will receive this back with each question graded pass/fail in our next class meeting. You have until the date specified above to submit corrections for partial credit.

1. (5 points) Compute the determinant of

$$A = \begin{bmatrix} 4 & 1 & 2 \\ 4 & 0 & 3 \\ 3 & -2 & 5 \end{bmatrix}.$$

2. (5 points) Let H be an $n \times n$ matrix and \mathbf{x} in \mathbb{R}^n . Suppose for a fixed \mathbf{c} in \mathbb{R}^n , the equation $H\mathbf{x} = \mathbf{c}$ is inconsistent.

(i) Is H invertible? Justify your answer.

(ii) Does the homogeneous equation $H\mathbf{x} = \mathbf{0}$ have a nontrivial solution? Justify your answer.