

Name _____ Quiz 4

Suppose A is a 7×7 matrix that is invertible. Which of the following are true?

- T or F 1) In Row Reduced Echelon form, A has 7 pivots.
- T or F 2) $\lambda = 0$ is not an eigenvalue.
- T or F 3) The matrix equation $A\vec{x} = \vec{0}$ has a unique solution.
- T or F 4) The matrix equation $A\vec{x} = \vec{b}$ has a unique solution for every $\vec{b} \in \mathbb{R}^7$.
- T or F 5) $|A| \neq 0$.

6) Given the matrix below, find its eigenvalues.

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

$$\begin{vmatrix} x & -2 \\ 0 & x-1 \end{vmatrix} = x(x-1) = 0$$

$$x = 0, x = 1$$