SECTION:

NAME:

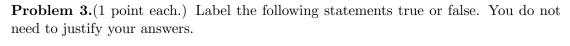
You have 30 minutes to complete this quiz. To receive full credit, you must justify your answers.

**Problem 1.**(5 points.) Compute the inverse of the matrix A, below.

$$A = \begin{bmatrix} 2 & -4 \\ 4 & -6 \end{bmatrix}$$

**Problem 2.**(5 points.) Compute the determinant of the following matrix.

$$\begin{bmatrix} 5 & -7 & 2 & 2 \\ 0 & 3 & 0 & -4 \\ -5 & -8 & 0 & 3 \\ 0 & 5 & 0 & -6 \end{bmatrix}$$



(a.) \_\_\_\_\_ For a square matrix A, if det(A) = 0, then A is invertible.

(b.) \_\_\_\_\_ If two rows of a square matrix A are identical, then  $\det(A) = 0$ .

(c.) \_\_\_\_\_ If a matrix A is invertible, then the linear transformation  $T_A$  of A is one-to-one and onto.

(d.) \_\_\_\_\_ If A and B are invertible matrices, then their product AB is invertible.

(e.) \_\_\_\_\_ For a square matrix A,  $\det(A^T) = -\det(A)$ .