

Math 225 Quiz 3

Don't forget to write down clearly your **Name**:

and **Net ID**:

1. True or False (5 points) Mark “T” (True) or “F” (False) in front of each statement.

_____ The transpose of an elementary matrix is also elementary.

_____ The row span and column span of a matrix have the same dimension.

_____ Any square matrix is a finite product of elementary matrices.

_____ If A is an invertible matrix, then the system of linear equations $Ax = b$ has a unique solution.

_____ The determinant $\det : M_n(\mathbb{F}) \longrightarrow \mathbb{F}$ is a linear map.

2. Determinant computation (5 points). Compute the determinant of the following matrix

$$A = \begin{pmatrix} 1 & 3 & 2 \\ 4 & 6 & 5 \\ 7 & 9 & 8 \end{pmatrix}.$$