

Name:

1. For each of the following statements, write the word “true” or “false.”

(a) For any two vectors \mathbf{u} and \mathbf{v} in \mathbb{R}^3 , $\text{Span}\{\mathbf{u}, \mathbf{v}\}$ is a plane containing the origin.

(b) Any line through the origin is equal to $\text{Span}\{\mathbf{u}\}$ for some nonzero $\mathbf{u} \in \mathbb{R}^3$.

2. Compute the inverse of the following matrix.

$$A = \begin{pmatrix} 1 & 1 - i & 0 \\ -6 & -6 + 6i & 3 \\ 0 & 1 & 0 \end{pmatrix}$$