1. The function $f : V \to W$, a linear map with matrix representation A, has an inverse if and only if

2. If the function $f : V \to W$, a linear map with matrix representation A, has inverse $f^{-1} : W \to V$ with matrix representation B, then $AB =$ \qquad and then $BA =$

3. If A is a nonsingular $n \times n$ matrix, then $\text{rref}(A) =$

4. Find A^{-1} for $A = \begin{pmatrix} 1 & 2 & 3 \\ 0 & 1 & 3 \\ 1 & -1 & -2 \end{pmatrix}$.

5. Solve the system of equations $\begin{cases} x + 2y + 3z = 8 \\ y + 3z = -4 \\ x - y - 2z = 0 \end{cases}$