

Instructions: Show all work. Use exact answers unless specifically asked to round. Answer all parts of each question.

1. Row-reduce the matrix to reduced echelon form. If this matrix represented a system of equations, would the solution be inconsistent or consistent, and if applicable, dependent or independent?

$$\left[\begin{array}{ccc|c} 2 & 1 & 2 & 2 \\ 3 & -5 & -1 & 4 \\ 1 & -2 & -3 & -6 \end{array} \right]$$