A system of equations is defined by

$$\begin{aligned} x - 3y + z &= -1 \\ 3x - 2y + 4z &= 11 \\ x + 4y + 2z &= 15 \end{aligned}$$

Use Gaussian elimination to determine whether the system shows redundancy, inconsistency or has a unique solution.

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Answer:

Create the augmented matrix, use Gaussian elimination to obtain three zeros on the left hand side of the third row and explain why the system is inconsistent. See marking instructions for details.