

Linear Algebra Introduction

Solve!

$$\begin{aligned}x + y &= 4 \\ 3x - y &= -8\end{aligned}$$

$$\begin{aligned}x + y + 3z &= 17 \\ 5y - z &= 16 \\ z &= 4\end{aligned}$$

Prove or disprove:

For all k , the system

$$\begin{aligned}kx + y &= 0 \\ x + ky &= 1\end{aligned}$$

has a solution.