Homework #332

Theo Park

MA687- *Prof. Carl Gauss*

Due on: 32 April 1954

Problem 1

(2 Points)

Hi students my name is Carl and use Gaussian elemination to find solution for

$$\left[\begin{array}{ccc|c} 1 & 1 & 1 & 3 \\ 2 & 3 & 7 & 0 \\ 1 & 3 & -2 & 17 \end{array}\right]$$

I have no clue why they named it after me when I literally just copied and pasted from some random Asian math book

Solution

Hello so this is my solution

$$\left[\begin{array}{ccc|c} 1 & 1 & 1 & 3 \\ 2 & 3 & 7 & 0 \\ 1 & 3 & -2 & 17 \end{array}\right] \begin{array}{l} \xrightarrow{R_2-2R_1} \\ \xrightarrow{R_3-R_1} \end{array} \left[\begin{array}{ccc|c} 1 & 1 & 1 & 3 \\ 0 & 1 & 5 & -7 \\ 0 & 2 & -3 & 14 \end{array}\right] \xrightarrow{R_3-2R_2} \left[\begin{array}{ccc|c} 1 & 1 & 1 & 3 \\ 0 & 1 & 5 & -7 \\ 0 & 0 & -13 & 26 \end{array}\right] \xrightarrow{\frac{R_3}{-13}} \left[\begin{array}{cccc} 1 & 1 & 1 & 3 \\ 0 & 1 & 5 & -7 \\ 0 & 0 & 1 & -2 \end{array}\right]$$

$$\begin{cases} x+y+z=3 \\ y+5z=-6 \\ z=-2 \end{cases} \quad \therefore \begin{cases} x=1 \\ y=4 \\ z=-2 \end{cases}$$

Problem 2

(98 Points)

That was easy right? Because I am a good professor who assigns only 2 question per homework, here's the final questions.

1. Find the inverse of
2. something
3. something
4. something
5. something
6. something
7. something
8. something
9. something

Solution

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