Homework #332

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MA687- *Prof. Carl Gauss*

Due on: 32 April 1954

Problem 1

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

(23 Points)

Solution

Hello so this is my solution

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

$$\begin{cases}x+y+z=3\\y+5z=-6\\z=-2\end{cases}\quad\therefore\begin{cases}x=1\\y=4\\z=-2\end{cases}\quad\text{Hello so this is my solution}$$

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Problem 1 continued on next page. . .

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

Problem 2

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

- Find the inverse of