

Nombre de alumno: Marlong Uriel Ramos Dmguez.

Nombre del profesor: Ing. Jorge Albores

Nombre del trabajo: Matriz

Materia: Algebra Lineal

Grado: A

Grupo: 1

har long (viet names) & ominguez.

$$4x + y + 2z = 9$$

$$3x + 2y + 3z = 11$$

$$x + 4y + z = 7$$

$$\left[\begin{array}{ccc|c} 4 & 1 & 2 & 9 \\ 3 & 2 & 3 & 11 \\ 1 & 4 & 1 & 7 \end{array} \right] \frac{1}{4} R_1$$

$$\left[\begin{array}{ccc|c} 1 & 1/4 & 1/2 & 9/4 \\ 0 & 5/4 & 3/2 & 17/4 \\ 0 & 15/4 & 1/2 & 19/4 \end{array} \right] \begin{array}{l} -3R_1 + R_2 \\ -1R_1 + R_3 \end{array}$$

$$-3 \quad -3/4 \quad -3/2 \quad -27/4$$

$$3 \quad 2 \quad 3 \quad 11$$

$$/ \quad 5/4 \quad 3/2 \quad 17/4$$

$$-1 \quad -1/4 \quad -1/2 \quad -9/4$$

$$1 \quad 4 \quad 1 \quad 7$$

$$/ \quad 13/4 \quad 1/2 \quad 19/4$$

$$\left[\begin{array}{ccc|c} 1 & 0 & 1/5 & 7/5 \\ 0 & 1 & 6/5 & 17/5 \\ 0 & 0 & -4 & -8 \end{array} \right] \begin{array}{l} -1/4 R_2 + R_1 \\ 4/5 R_2 \\ -15/4 R_2 + R_3 \end{array}$$

$$\left[\begin{array}{ccc|c} 0 & -1/4 & -3/10 & -17/20 \\ 1 & 1/4 & 1/2 & 9/4 \\ 1 & / & 1/5 & 7/5 \end{array} \right]$$

$$\left[\begin{array}{ccc|c} 0 & -15/4 & -9/2 & -51/4 \\ 0 & 15/4 & 1/2 & 19/4 \\ 0 & / & -4 & -8 \end{array} \right]$$

$$\left[\begin{array}{ccc|c} 1 & 0 & 0 & 6/5 \\ 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & 2 \end{array} \right] \begin{array}{l} -1/5 R_3 + R_1 \\ -6/5 R_3 + R_2 \\ -1/4 R_3 \end{array}$$

$$0 \quad 0 \quad -6/15 \quad -12/5$$

$$0 \quad 1 \quad 6/15 \quad 17/5$$

$$0 \quad 1 \quad / \quad 1$$

$$0 \quad 0 \quad -1/5 \quad -1/5$$

$$1 \quad 0 \quad 1/5 \quad 7/5$$

$$1 \quad 0 \quad / \quad 6/5$$

$$x = 6/5$$

$$y = 1$$

$$z = 2$$

Ramos Dominguez

$$6x + 2y + 5z = 21$$

$$4x + 5y + 2z = 20$$

$$x + 4y + 3z = 16$$

$$\left[\begin{array}{ccc|c} 6 & 2 & 5 & 21 \\ 4 & 5 & 2 & 20 \\ 1 & 4 & 3 & 16 \end{array} \right] \quad \frac{1}{6} R_1$$

$$\left[\begin{array}{ccc|c} 1 & 1/3 & 5/6 & 7/2 \\ 0 & 11/3 & -4/3 & 6 \\ 0 & 11/3 & 13/6 & 25/2 \end{array} \right] \quad \begin{array}{l} -4R_1 + R_2 \\ -1R_1 + R_3 \end{array}$$

$$\begin{array}{cccc} -4 & -4/3 & -10/3 & -1/4 \\ 4 & 5 & 2 & 20 \\ / & 11/3 & -4/3 & 6 \end{array}$$

$$\begin{array}{cccc} 4 & 5 & 2 & 20 \\ / & 11/3 & -4/3 & 6 \end{array}$$

$$\begin{array}{cccc} -1 & -1/3 & -5/6 & -7/2 \\ 1 & 4 & 3 & 16 \\ / & 11/3 & 13/6 & 25/2 \end{array}$$

$$\begin{array}{cccc} 1 & 4 & 3 & 16 \\ / & 11/3 & 13/6 & 25/2 \end{array}$$

$$\left[\begin{array}{ccc|c} 1 & 0 & 21/22 & 65/22 \\ 0 & 1 & -4/11 & 18/11 \\ 0 & 0 & 7/2 & 13/2 \end{array} \right]$$

$$\begin{array}{cccc} 0 & -1/3 & 4/33 & -6/11 \\ 1 & 1/3 & 5/6 & 7/2 \\ / & / & 21/22 & 65/22 \end{array}$$

$$\begin{array}{cccc} 1 & 1/3 & 5/6 & 7/2 \\ / & / & 21/22 & 65/22 \end{array}$$

$$\begin{array}{cccc} 1 & / & / & / \end{array}$$

$$\begin{array}{cccc} 0 & -11/3 & 4/3 & -6 \\ 0 & 11/3 & 13/6 & 25/2 \\ / & / & 7/2 & 13/2 \end{array}$$

$$\begin{array}{cccc} 0 & 11/3 & 13/6 & 25/2 \\ / & / & 7/2 & 13/2 \end{array}$$

$$\begin{array}{cccc} 0 & / & 7/2 & 13/2 \end{array}$$

$$\left[\begin{array}{ccc|c} 1 & 0 & 0 & 13/11 \\ 0 & 1 & 0 & -74/77 \\ 0 & 0 & 1 & 13/7 \end{array} \right] \quad \begin{array}{l} -21/22 R_3 + R_1 \\ 4/11 R_3 + R_2 \\ 2/7 R_3 \end{array}$$

$$\begin{array}{cccc} 0 & 0 & 4/11 & 52/77 \\ 0 & 1 & -4/11 & -18/11 \\ / & / & / & -74/77 \end{array}$$

$$\begin{array}{cccc} 0 & 1 & -4/11 & -18/11 \\ / & / & / & -74/77 \end{array}$$

$$\begin{array}{cccc} 0 & 1 & / & -74/77 \end{array}$$

$$\begin{array}{cccc} 0 & 0 & -21/22 & -39/22 \\ 1 & 0 & 21/22 & 65/22 \\ / & / & / & 13/11 \end{array}$$

$$\begin{array}{cccc} 1 & 0 & 21/22 & 65/22 \\ / & / & / & 13/11 \end{array}$$

$$\begin{array}{cccc} 1 & 0 & / & 13/11 \end{array}$$

$$X = 13/11$$

$$Y = 74/77$$

$$Z = 13/7$$