Benjamin Walter Assignment Intro_to_Matrices due 11/03/2021 at 02:01pm EET

Problem 1. (1 point) Library/WHFreeman/Holt_linear_algebra/Chaps_1-4/2.2.13.pg

Find *A*, and **b** such that $A\mathbf{x} = \mathbf{b}$ corresponds to the given linear system.

$$5x_1 + 1x_2 - 8x_3 = 5$$

 $0x_1 + 3x_2 - 6x_3 = 3$

Problem 2. (1 point) Library/WHFreeman/Holt_linear_algebra/Chaps_1-4/2.1.12.pg

Express the following system of linear equations as a vector equation.

 $6x_1 - 3x_2 - 4x_3 = -8$ $-3x_1 + 5x_2 + 8x_3 = -3$ $-2x_1 + 2x_2 + 9x_3 = 5$

Problem 3. (1 point) METUNCC/Linear_Algebra/p23.pg Let

$$A = \begin{bmatrix} 3 & 1 & 3 \\ 3 & -1 & 5 \end{bmatrix} \text{ and } B = \begin{bmatrix} 8 & 0 \\ 4 & -4 \\ 3 & 5 \end{bmatrix}$$

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Multiply:

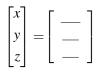
$$AB = \begin{bmatrix} --- \\ -- \end{bmatrix}$$

and

$$BA = \left[\begin{array}{cccc} \dots & \dots & \dots \\ \dots & \dots & \dots \\ \dots & \dots & \dots \end{array} \right]$$

Problem 4. (1 point) METUNCC/Linear_Algebra/solve_lower-triangular.pg Solve the division problem **г** ¬

$$\begin{bmatrix} 3 & 0 & 0 \\ -4 & 5 & 0 \\ -4 & 3 & 1 \end{bmatrix} \begin{bmatrix} x \\ y \\ z \end{bmatrix} = \begin{bmatrix} -3 \\ 14 \\ 12 \end{bmatrix}$$



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