

Name: _____
PCH

Date: _____
Ms. Loughran

1. The matrix $A = \begin{bmatrix} -4 & -5 & -1 \\ -2 & -5 & -2 \\ -2 & 5 & 2 \end{bmatrix}$ corresponds to the coefficient matrix for the system of equations:

$$-4x - 5y - z = 18$$

$$-2x - 5y - 2z = 12$$

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

$$A^{-1} = \begin{bmatrix} 0 & -\frac{1}{4} & -\frac{1}{4} \\ -\frac{2}{5} & \frac{1}{2} & \frac{3}{10} \\ 1 & -\frac{3}{2} & -\frac{1}{2} \end{bmatrix}$$
 Use this fact to solve the system of equations using matrices.