

MATH 210 FINITE MATHEMATICS

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2.3 System of Linear Equations - Under and Overdetermined Systems

Example 1

Consider the final reduced augmented matrix

$$\left[\begin{array}{ccc|c} 1 & 0 & 0 & 17 \\ 0 & 1 & 0 & -3 \\ 0 & 0 & 0 & 13 \end{array} \right]$$

What does it mean?

Example 2

Consider the final reduced augmented matrix

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

What does it mean?

Example 3

Consider the final reduced augmented matrix

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

What does it mean?

Example 4

Solve the following system

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

$$3x - 2y + z = 4$$

$$2x - 3y - z = 1$$

Example 5

Solve the following system

$$x + y = 7$$

$$2x + 3y = 8$$

$$-5x - 5y = -35$$

Example 6

Solve the following system

$$x + y = 7$$

$$2x + 3y = 8$$

$$4x - y = 3$$