

7.2.1: Systems of Linear Equations and the Gauss-Jordan Method (Exercises)

SECTION 7.2 PROBLEM SET: SYSTEMS OF LINEAR EQUATIONS

Solve the following by the Gauss-Jordan Method. Show all work.

| | |
|---|--|
| 1) $\begin{aligned}x + 3y &= 1 \\ 2x - 5y &= 13\end{aligned}$ | 2) $\begin{aligned}x - y - z &= -1 \\ x - 3y + 2z &= 7 \\ 2x - y + z &= 3\end{aligned}$ |
| 3) $\begin{aligned}x + 2y + 3z &= 9 \\ 3x + 4y + z &= 5 \\ 2x - y + 2z &= 11\end{aligned}$ | 4) $\begin{aligned}x + 2y &= 0 \\ y + z &= 3 \\ x + 3z &= 14\end{aligned}$ |

SECTION 7.2 PROBLEM SET: SYSTEMS OF LINEAR EQUATIONS

Solve the following by the Gauss-Jordan Method. Show all work.

| | |
|---|--|
| 5) Two apples and four bananas cost \$2.00 and three apples and five bananas cost \$2.70. Find the price of each. | 6) A bowl of corn flakes, a cup of milk, and an egg provide 16 grams of protein. A cup of milk and two eggs provide 21 grams of protein. Two bowls of corn flakes with two cups of milk provide 16 grams of protein. How much protein is provided by one unit of food? |
| 7) $\begin{aligned}x + 2y &= 10 \\ y + z &= 5 \\ z + w &= 3 \\ x + w &= 5\end{aligned}$ | 8) $\begin{aligned}x + w &= 6 \\ 2x + y + w &= 16 \\ x - 2z &= 0 \\ z + w &= 5\end{aligned}$ |

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