Classwork Matrices

Please work all problems on a separate sheet of paper.

Write the augmented matrix for each system of linear equations.

1. $\begin{cases} 2x + y + 2z = 2 \\ 3x - 5y - z = 4 \\ x - 2y - 3z = -6 \end{cases}$

2. $\begin{cases} x - y + z = 8 \\ y - 12z = -15 \\ z = 1 \end{cases}$

3. $\begin{cases} 3x - 2y + 5z = 31 \\ x + 3y - 3z = -12 \\ -2x - 5y + 3z = 11 \end{cases}$

4. $\begin{cases} 5x - 2y - 3z = 0 \\ x + y = 5 \\ 2x - 3z = 4 \end{cases}$

Solve each of the following linear systems using matrices.

5. $\begin{cases} x + y - z = -2 \\ 2x - y + z = 5 \\ -x + 2y + 2z = 1 \end{cases}$

6. $\begin{cases} x + 3y = 0 \\ x + y + z = 1 \\ 3x - y - z = 11 \end{cases}$

7. $\begin{cases} 2x - y - z = 4 \\ x + y - 5z = -4 \\ x - 2y = 4 \end{cases}$

8. $\begin{cases} x + y + z = 4 \\ x - y - z = 0 \\ x - y + z = 2 \end{cases}$

9. $\begin{cases} 2x + 2y + 7z = -1 \\ 2x + y + 2z = 2 \\ 4x + 6y + z = 15 \end{cases}$

10. $\begin{cases} 5x + 12y + z = 10 \\ 2x + 5y + 2z = -1 \\ x + 2y - 3z = 5 \end{cases}$

11. $\begin{cases} 2x - 4y + z = 3 \\ x - 3y + z = 5 \\ 3x - 7y + 2z = 12 \end{cases}$

12. $\begin{cases} 5x + 8y - 6z = 14 \\ 3x + 4y - 2z = 8 \\ x + 2y - 2z = 3 \end{cases}$

13. $\begin{cases} 3x + 4y + 2z = 3 \\ 4x - 2y - 8z = -4 \\ x + y - z = 3 \end{cases}$

14. $\begin{cases} 8x + 5y + 11z = 30 \\ -x - 4y + 2z = 3 \\ 2x - y + 5z = 12 \end{cases}$