

Name:

1. Solve the system by inverting the coefficient matrix and using the following theorem:

Theorem. If A is an invertible matrix, then the system $A\vec{x} = \vec{b}$ has the unique solution $\vec{x} = A^{-1}\vec{b}$.

$$\begin{aligned}x + y + z &= 5 \\x + y - 4z &= 10 \\-4x + y + z &= 0\end{aligned}$$