

Solve the system of linear equations:

$$\begin{aligned}x + y + z &= 6 \\2x + y - z &= 1 \\x - 5y - z &= -12\end{aligned}$$

Choose any two of the equations and use them to eliminate one variable:

Choose a different pair of equations and use them to eliminate the same variable:

Use the two equations in two variables you have just found above, and solve them for their two variables:

Substitute back into any one of the original equations to find the remaining variable:

check in all three of the original equations: