

## *Gauss-Jordan: 3 eqs 2 variables, different slopes*

$$x - y = -11$$

$$2x - y = 3$$

$$2x + y = 53$$

Reduce the augmented matrix:

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Reduce the augmented matrix:

$$\left[ \begin{array}{ccc|c} 1 & -1 & -11 & \\ 2 & -1 & 3 & \\ 2 & 1 & 53 & \end{array} \right] \xrightarrow{?} \left[ \begin{array}{ccc|c} 1 & -1 & -11 & \\ 0 & 1 & 25 & \\ 2 & 1 & 53 & \end{array} \right]$$

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$$\xrightarrow{r'_3 = -3r_2 + r_3} \left[ \begin{array}{ccc|c} 1 & -1 & -11 & \\ 0 & 1 & 25 & \\ 0 & 0 & 0 & \end{array} \right] \quad \text{Gaussian or row echelon}$$

$$\xrightarrow{r'_1 = r_2 + r_1} \left[ \begin{array}{ccc|c} 1 & 0 & 14 & \\ 0 & 1 & 25 & \\ 0 & 0 & 0 & \end{array} \right] \quad \text{Gauss-Jordan or reduced row echelon}$$

## *Gauss-Jordan: 3 unknowns*

Reduce the augmented matrix