

SOLVE SIMULTANEOUS LINEAR EQUATION USING GAUSSIAN ELIMINATION METHOD

Solve
$$\begin{aligned} x + y - z &= 1 \\ 2x - y + 2z &= 0 \\ x + 2y - 2z &= 2 \end{aligned}$$
 by using Gaussian Elimination Method.

$$\left(\begin{array}{ccc|c} & & & \end{array} \right) \left(\begin{array}{c} \\ \\ \end{array} \right) = \left(\begin{array}{c} \\ \\ \end{array} \right)$$

$$\xrightarrow[\begin{array}{c} 2R_1 - R_2 \\ R_3 - R_1 \end{array}]{\begin{array}{c} \\ \\ \end{array}} \left(\begin{array}{ccc|c} & & & \end{array} \right)$$

$$\xrightarrow{R_2 + 3R_3} \left(\begin{array}{ccc|c} & & & \end{array} \right)$$

$$\begin{array}{rcl} x + y - z & & \\ 3y - 4z & = & \\ -z & & \end{array}$$

$$z = \qquad y = \qquad x =$$