

EX1

$$2x + y + 3z = 5 \quad (1)$$

$$2y - z = 5 \quad (2)$$

$$2x + y + 2z = 6 \quad (3)$$

(1) & (2)

(2) & (3)

Eliminate Some Variable

$$\begin{array}{r} 2x + y + 3z = 5 \quad (1) \\ 2y - z = 5 \quad (2) \end{array}$$

$$\begin{array}{r} 2x + y + 3z = 5 \\ 6y - 3z = 15 \\ \hline 2x + 7y = 20 \end{array}$$

$$\begin{array}{r} 2y - z = 5 \quad (2) \\ 2x + y + 2z = 6 \quad (3) \end{array}$$

$$\begin{array}{r} 4y - 2z = 10 \\ 2x + y + 2z = 6 \\ \hline 2x + 5y = 16 \end{array}$$

$$\begin{array}{r} 2x + 7y = 20 \\ 2x + 5y = 16 \end{array}$$

Solve for  $x$  &  $y$   $\longrightarrow$   $x = 3$   
 $y = 2$

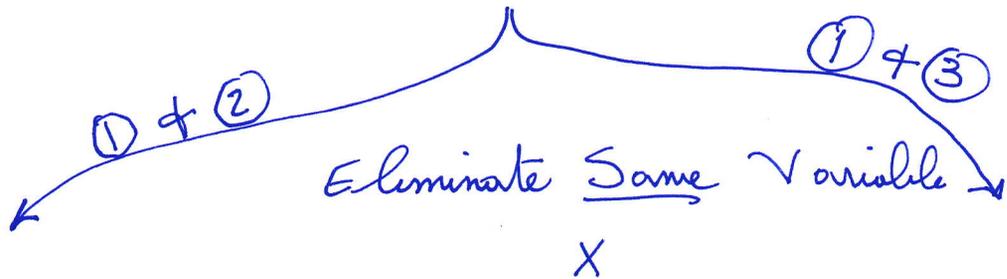
Subst in any  $\longrightarrow z = -1$

Ex 2

$$2X + 2y + 3z = 5 \quad \text{--- (1)}$$

$$X + 3y + 2z = 1 \quad \text{--- (2)}$$

$$X + y + 2z = 3 \quad \text{--- (3)}$$



$$\begin{array}{l} 2X + 2y + 3z = 5 \\ X + 3y + 2z = 1 \end{array}$$

$$\begin{array}{r} 2X + 2y + 3z = 5 \\ -2X - 6y - 4z = -2 \\ \hline -4y - z = 3 \end{array}$$

$$\begin{array}{l} 2X + 2y + 3z = 5 \\ X + y + 2z = 3 \end{array}$$

$$\begin{array}{r} 2X + 2y + 3z = 5 \\ -2X - 2y - 4z = -6 \\ \hline -z = -1 \\ \boxed{z = 1} \end{array}$$

$$\begin{array}{l} -4y - z = 3 \\ -4y - 1 = 3 \\ \Rightarrow \boxed{y = -1} \end{array}$$

Subst in any,  $\boxed{x = 2}$