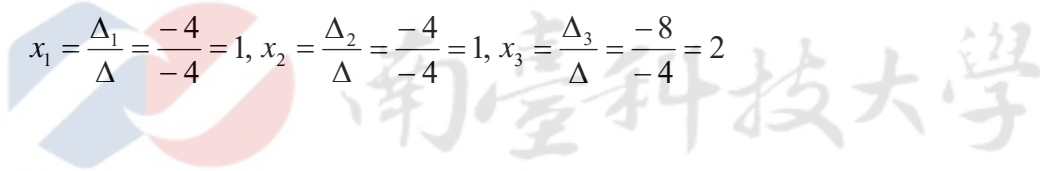


Use Cramer's rule to solve $\begin{cases} x_1 + 2x_2 + x_3 = 5 \\ 2x_1 + 2x_2 + x_3 = 6. \text{ [101 勤益電子 3]} \\ x_1 + 2x_2 + 3x_3 = 9 \end{cases}$

$$\text{Solution : } \Delta = \begin{vmatrix} 1 & 2 & 1 \\ 2 & 2 & 1 \\ 1 & 2 & 3 \end{vmatrix} = -4, \Delta_1 = \begin{vmatrix} 5 & 2 & 1 \\ 6 & 2 & 1 \\ 9 & 2 & 3 \end{vmatrix} = -4, \Delta_2 = \begin{vmatrix} 1 & 5 & 1 \\ 2 & 6 & 1 \\ 1 & 9 & 3 \end{vmatrix} = -4, \Delta_3 = \begin{vmatrix} 1 & 2 & 5 \\ 2 & 2 & 6 \\ 1 & 2 & 9 \end{vmatrix} = -8$$

$$x_1 = \frac{\Delta_1}{\Delta} = \frac{-4}{-4} = 1, x_2 = \frac{\Delta_2}{\Delta} = \frac{-4}{-4} = 1, x_3 = \frac{\Delta_3}{\Delta} = \frac{-8}{-4} = 2$$



Southern Taiwan University of Science and Technology