



1. Find the following determinants:

$$(a) \quad \begin{vmatrix} 1 & 0 \\ 0 & 1 \end{vmatrix}$$

$$(b) \quad \begin{vmatrix} 3 & 2 \\ 1 & 4 \end{vmatrix}$$

$$(c) \quad \begin{vmatrix} 1 & 2 & 3 \\ -2 & 1 & 0 \\ 3 & -1 & 1 \end{vmatrix}$$

2. Solve the following systems using (i) matrix method, and (ii) Cramer's rule:

$$(a) \quad \begin{aligned} 3x - 2y &= -1 \\ x + y &= 3 \end{aligned}$$

$$(b) \quad \begin{aligned} -2x + 3y &= 2 \\ x + y &= 4 \end{aligned}$$

$$(c) \quad \begin{aligned} x - 2y + z &= 7 \\ 3x - y - z &= -2 \\ x - y + 2z &= 6 \end{aligned}$$