

$$Z = 3x_1 + 6x_2 \quad - \quad - \quad \text{Max.}$$

$$\text{ST} \quad 3x_1 + 4x_2 - s_1 + A = 12.$$

$$-2x_1 + x_2 + s_2 = 4.$$

| C_j | 3 | 6 | 0 | 0 | -M | | | |
|-------|-------------|-------|-------|-------|-------|----|----|----------|
| C_B | Basis | x_1 | x_2 | s_1 | s_2 | A | b | θ |
| -M | A | 3 | 4 | -1 | 0 | 1 | 12 | 3 ← |
| 0 | s_2 | -3 | 1 | 0 | 1 | 0 | 4 | 4 |
| | Z_j | -3M | -4M | +M | 0 | -M | | |
| | $C_j - Z_j$ | 3+3M | 6+4M | -M | 0 | 0 | | |

↑

| C_B | Basis | x_1 | x_2 | s_1 | s_2 | b | θ |
|-------|-------------|-------|-------|-------|-------|---|----------|
| 6 | x_2 | 3/4 | 1 | -1/4 | 0 | 3 | -ve |
| 0 | s_2 | -11/4 | 0 | 1/4 | 1 | 1 | 4 ← |
| | Z_j | 9/2 | 6 | -8/2 | 0 | | |
| | $C_j - Z_j$ | -3/2 | 0 | 3/2 | 0 | | |

↑

| C_B | Basis | x_1 | x_2 | s_1 | s_2 | b | θ |
|-------|-------------|-------|-------|-------|-------|---|----------|
| 6 | x_2 | -2 | 1 | 0 | 1 | 4 | -ve |
| 4 | s_1 | -11 | 0 | 1 | 4 | 4 | -ve. |
| | Z_j | -12 | 6 | 0 | 6 | | |
| | $C_j - Z_j$ | 15 | 0 | 0 | -6 | | |

↑

∴ The LPP has an unbounded solution.