

$$\text{Maximum } Z = 6x_1 + 8x_2$$

subject to con

$$5x_1 + 10x_2 \leq 60 \quad \text{--- ①}$$

$$4x_1 + 4x_2 \leq 40 \quad \text{--- ②}$$

$$x_1, x_2 \geq 0$$

Graph LPP & under Graphical Method.

$$\textcircled{1} \quad 5x_1 + 10x_2 = 60$$

$$5x_0 + 10x_2 = 60$$

$$0 + 10x_2 = 60$$

$$10x_2 = 60$$

$$x_2 = 60/10 = 6$$

$$(0, 6)$$

$$5x_1 + 10x_2 = 60$$

$$5x_1 + 10x_0 = 60$$

$$5x_1 + 0 = 60$$

$$5x_1 = 60$$

$$x_1 = 60/5 = 12$$

$$(12, 0)$$

$$\textcircled{2} \quad 4x_1 + 4x_2 = 40$$

$$4x_0 + 4x_2 = 40$$

$$0 + 4x_2 = 40$$

$$4x_2 = 40$$

$$x_2 = 40/4 = 10$$

$$(0, 10)$$

$$4x_1 + 4x_2 = 40$$

$$4x_1 + 4x_0 = 40$$

$$4x_1 + 0 = 40$$

$$4x_1 = 40$$

$$x_1 = 40/4 = 10$$

$$(10, 0)$$

Objective Function:

$$6x_1 + 8x_2$$

$$6x_0 + 8x_0 =$$

$$0 + 0 = 0$$

$$6x_0 + 8x_6 =$$

$$0 + 48 = 48$$

$$6x_8 + 8x_2 =$$

$$48 + 16 = 64$$

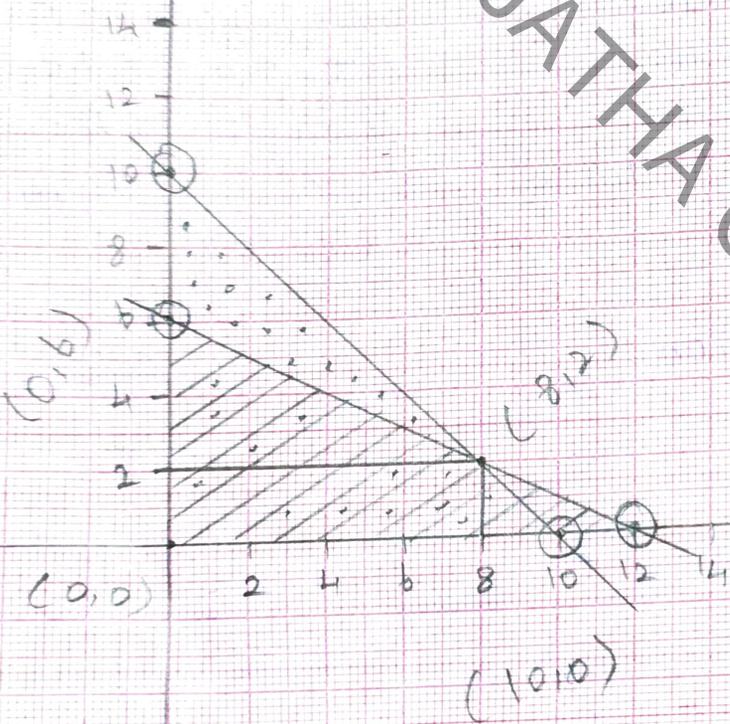
$$6x_{10} + 8x_0 =$$

$$60 + 0 = 60$$

$$\text{Maximum } Z = 64$$

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- $(0,0)$
- $(0,6)$
- $(8,2)$
- $(10,0)$



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