

Chapter 12

LINEAR PROGRAMMING

EXAMPLE- 1:

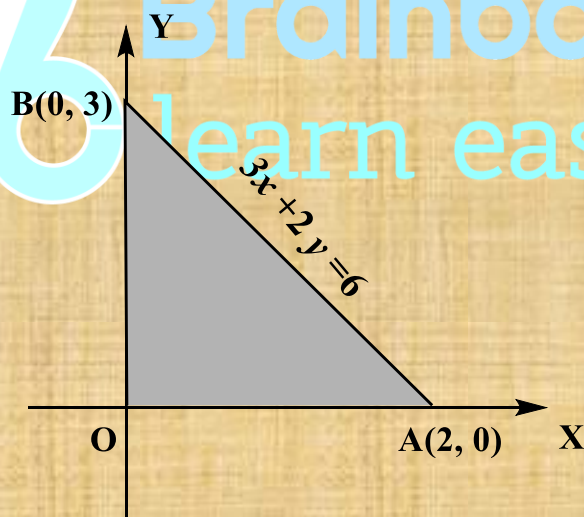
Maximise $z(x, y) = 3x + 4y$ subject to the constraints:
 $3x + 2y \leq 6, x \geq 0, y \geq 0$.

SOLUTION:

On plotting the given constraints:

$$3x + 2y = 6, x = y = 0,$$

we get, $O(0,0), A(2,0), B(0,3)$ as corner points of feasible region OAB.



$$\therefore z(O) = z(0,0) = 0$$

$$z(A) = 3 \times 2 + 4 \times 0 = 6$$

$$z(B) = 3 \times 0 + 4 \times 3 = 12$$

$\therefore$ Maximum value of 'z' is 12 at point $B(0,3)$.