

Chapter 12

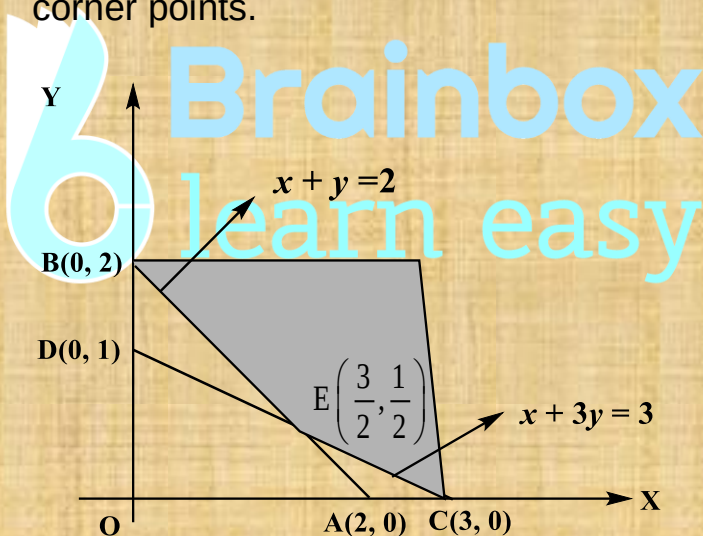
LINEAR PROGRAMMING

EXAMPLE- 3:

Minimise $z(x, y) = 3x + 5y$ subject to $x + 3y \geq 3$,
 $x + y \geq 2$, $x, y \geq 0$.

SOLUTION:

The feasible region is unbounded so to obtain minimum value of z , $C(3, 0)$, $E\left(\frac{3}{2}, \frac{1}{2}\right)$, $B(0, 2)$ be the corner points.



$$\therefore z(C) = 3 \times 3 = 9$$

$$z(E) = 3 \times \frac{3}{2} + 5 \times \frac{1}{2} = 7$$

$$z(B) = 5 \times 2 = 10$$

$\therefore$ Minimum value of 'z' is 7 at point $E\left(\frac{3}{2}, \frac{1}{2}\right)$.