LINEAR PROGRAMMING

1. formulation
2. problem space
3. appln. & procedures.

(1) $\max_{x_1 x_2} \; 3x_1 + 2x_2$ → $\frac{88}{9}$

$x_1 \geq 0$
$x_2 \geq 0$
} $\in R$

$2x_1 + x_2 \leq 6$

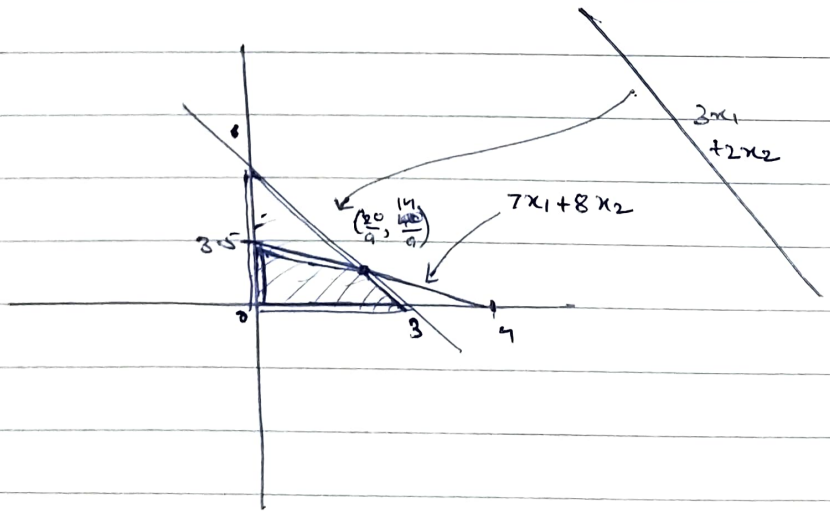
$7x_1 + 8x_2 \leq 28$

$\left(\frac{20}{9}, \frac{14}{9}\right)$

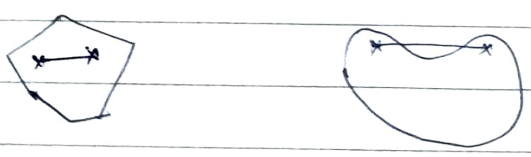
without constraints, not much meaning in solving problem

$x_1 \leq 0$ maximization prolem

$x_2 \leq 0$ = - minimization problem.



convex polygon non-convex polygon.



$\max_x \quad Z = C^T x$ $\qquad (C, A, b)$

$Ax \leq b$ $\qquad m$ variable.

$x \geq 0$ $\qquad n$ constraints

(C, A, b)

C: $m \times 1$, A: $n \times m$, b: $n \times 1$