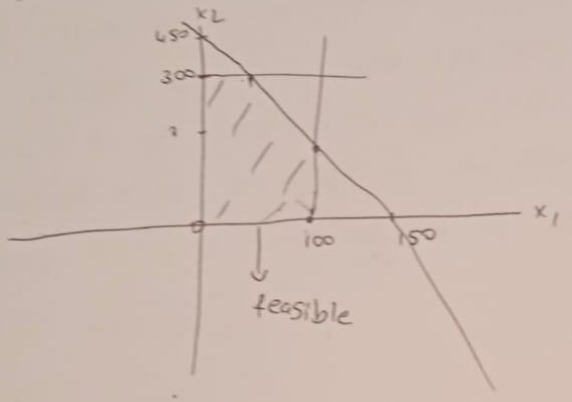
Dilan Dilen
1501 19912



Corner = 0, 300
100, 0
100, 150
50, 300

$3x_1 + 5x_2 = z$

(0, 3) → 15
(1, 0) → 3
(1, 1,5) → 15,5

0,5, 4,5 → +22,5
22,5
26,5

50
(0,5, 3) → 19

+ 15

max

50, 300 → is values of x_1 and x_2
x_1 x_2
900 ~~rate~~ profit
1 900 profit

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Name: Dilan Dilen
ID: 1501 19912

Q1)

2 cowboy hats 1 hat theee times as much as type 2, 450 type 2 limited to 100 and 300
T1 T2

profit 8 and 5

1) build

2) solve graphically

Solution:

x_1	x_2	
3T	T	450 t
100	300 hat	
8	5	

T = time to take made hat 2

$3Tx_1 + Tx_2 \leq 450T$

$3x_1 + x_2 \leq 450 \rightarrow (150,0)\ (0,450)$

$x_1 \leq 100$

$x_2 \leq 300$

maximize

$Z = 8x_1 + 5x_2$

constrait

$3x_1 + x_2 \leq 450$

$x_1 \leq 100$

$x_2 \leq 300$

$x_1, x_2 \geq 0$