

I am aware that any forms of cheating in this exam will result in zero grade and a disciplinary investigation. I accept all rules and regulations of this exam. I give permission for the processing of my personal data as stated in the Cheating Test provided on this Faculty of Engineering website.

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① $x_1 \rightarrow$ tyre 1, $x_2 \rightarrow$ tyre 2

labor time

$x_1 \rightarrow 3t$
 $x_2 \rightarrow t$

4.50 t time a day

Constraints

$$x_1 \leq 100$$

$$x_2 \leq 300$$

$$3x_1 + x_2 \leq 450$$

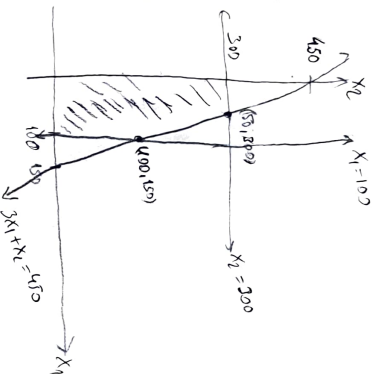
Objective Function

$$\text{max } y = 8x_1 + 5x_2$$

$$(1) y = 8.50 + 5.00 = 190 \rightarrow \text{max}$$

$$(2) y = 8.100 + 5.150 = 1550$$

$$x_1 = 50, x_2 = 300 \text{ when profit is max}$$



Q:

could what produces two types of roadways both A type 1 but requires three times as much labor time as type 2. If all available labor time is divided Type 2, the company can produce a total of 450 Type 2 roadways. The market wants for the two types 100 and 300, respectively. The profit is \$8 per Type 1 and \$5 per Type 2 but determine the number of bids for each type to maximize profit.

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A) $x_1 \rightarrow \text{Type 1}$, $x_2 \rightarrow \text{Type 2}$

Labor time

$$x_1 \rightarrow 3t$$

$$x_2 \rightarrow 6$$

450 t time a day

Constraints

$$x_1 \leq 100$$

$$x_2 \leq 300$$

$$3x_1 + x_2 \leq 450$$

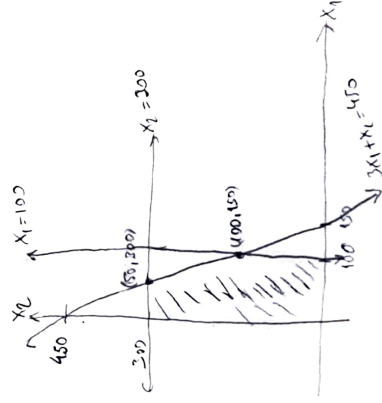
Objective Function

$$\text{max } y = 8x_1 + 5x_2$$

$$(1) y = 2.50 + 5.200 = 1305 \rightarrow \text{max}$$

$$(2) y = 8.100 + 5.150 = 1550$$

$$x_1 = 50, x_2 = 300 \text{ when profit is max}$$



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Q: Willd west produces two types of cowboy hats. A type 1 hat requires three times as much labor time as type 2. If all available labor time is dedicated Type 2, the company can produce a total of 450 Type 2 hats a day. The market limits for the two types are 100 and 300, respectively. The profit is \$8 per Type 1 and \$5 per Type 2 hat. Determine the number of hats for each type to maximize profit.