

QUIZ 1

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

~~B. Apaydin~~

① Wild West produces two types of cowboy hats.

A type 1 hat requires 3-times as much labor time as type 2.

Company can produce a total of 450 Type 2 hats a day.

The market limits for 2 types are 100 and 300 per day.

The profit is \$8 per Type 1 hat

Max profit.

\$5 per Type 2 hat

$x_1 = \text{Type 1 hat}$

$x_2 = \text{Type 2 hat}$

$$Z = 8x_1 + 5x_2$$

Constraints; $3x_1 + x_2 \geq 0 \rightarrow x_1 = 0 \quad 0 + x_2 = 0$
 $x_2 = 0$

$$x_2 \leq 450$$

$$x_2 = 0 \quad 3x_1 = 0$$

$$x_1 = 0$$

$$x_1 + x_2 \leq 400$$

$$x_2 = 450$$

$$x_1 \leq 100 \rightarrow x_1 = 100$$

$$x_2 \leq 300 \rightarrow x_2 = 300$$

$$x_1 = 0 \quad x_2 = 400$$

$$x_2 = 0 \quad x_1 = 400$$

$$Z = 8x_1 + 5x_2$$

$$x_1 = 100 \quad x_2 = 300$$

$$Z = 8(100) + 5(300)$$

$$Z = 800 + 1500$$

$$Z = 2300$$

