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 a stated Text Provided on the Faculty Engineering web site.

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Wild west produces two types of cowboy hats. A type 1 hat requires three times as much labor time as a type 2. if the all available labor time is dedicated to type 2 alone the company can produce a total of 450 type 2 hats a day. The market limits for the two types are 100 and 300 hats per day for Type 1 and Type 2 respectivly. the Profit is 8$ per Type 1 and 5$ per hat 2

Determine max. Profit

- Build the math. problem
- Solve the Proglem graphically

Type 1 hat $= x_1$

Type 2 hat $= x_2$

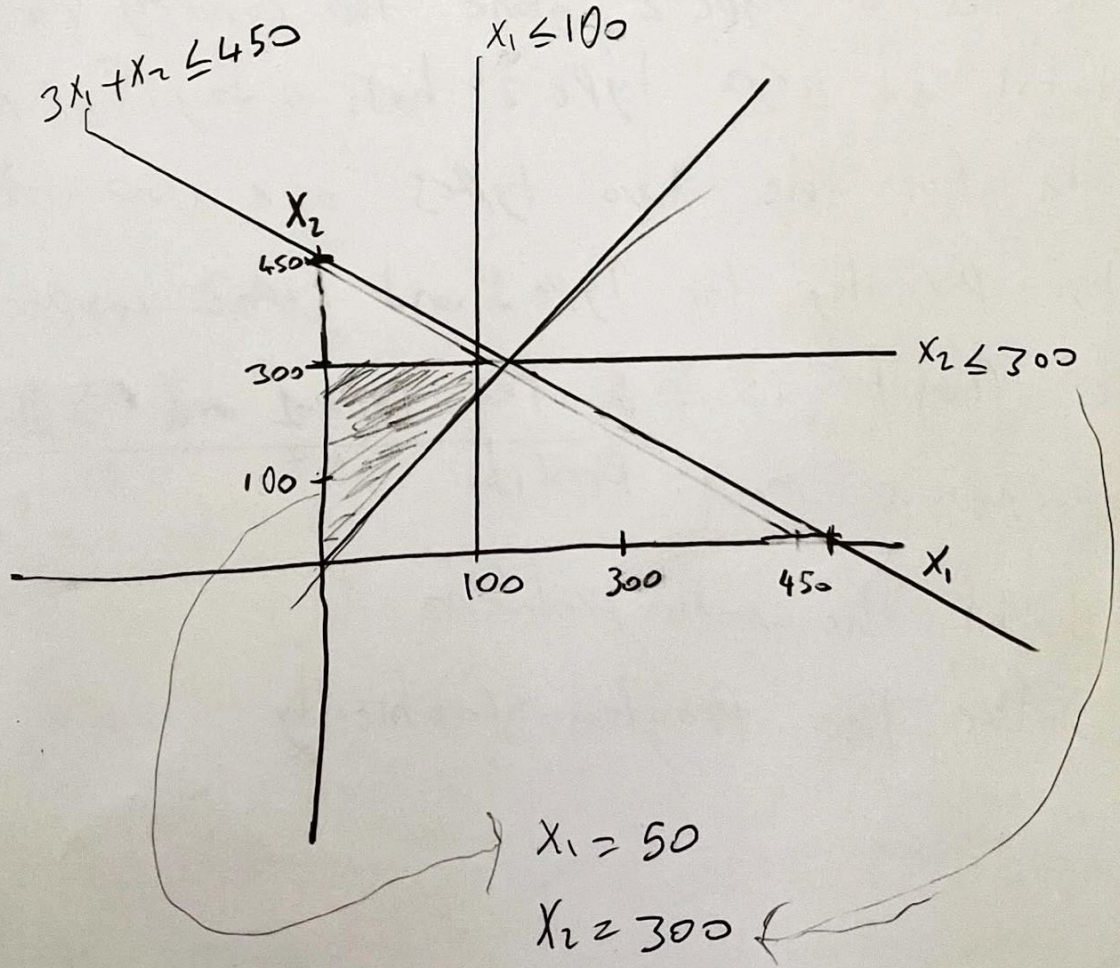
Maximize $z = 8x_1 + 5x_2$

$3x_1 + x_2 \leq 450$

$x_1 \leq 100$

$x_2 \leq 300$

$x_1, x_2 \geq 0$



$x_1 = 50$

$x_2 = 300$

$z = x_1 \cdot 8 + x_2 \cdot 5$

$50 \cdot 8 + 300 \cdot 5 =$ **1900 $**