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1-) Wild West produces two types of cowboy hats. A type 1 hat requires three times as much labor time as type 2. If the all available labor is dedicated to type 2 alone, The company can produce a total of 450 Type 2 hats a day. The market limit for two types are 100 and 300 hats per day for Type 1 and Type 2, respectively. The profit is $8 per Type 1 and $5 per Type 2. Determine the the number of hats of each type that would maximize profit.

I. Build the mathematical model of the problem.

II. Solve the problem graphically

1-) $z = 8x_1 + 5x_2$ maximize

$3x_1 + x_2 \leq 450$

$x_1 = 100$

$x_2 = 150$

$x_1 = 100$
$x_2 = 150$

2-)