Homework 5

Ingredient	Box of vanilla ice cream	Box of strawberry ice cream	Amount of Ingredient per day
fresh milk	0.5 liter	0.2 liter	10 liters
Doll	1 doll	1 doll	30 dolls
Profit/ box	$2	$3	

Solving Process

1. **Decision Variables**

$X1$ = Amount of vanilla ice cream box

$X2$ = Amount of strawberry ice cream box

2. **Objective function**

$MaxZ = C1X1 + C2X2 = 2(X1) + 3(X2)$

3. **Constraints**

Fresh milk: $(0.5*X1) + (0.2*X2) <= 10$

Doll: $(1*X1) + (1*X2) <= 30$

$X1, X2 >= 0$

Answer

From python -> $X1 = 0$,

$X2 = 30$

$MaxZ = 2(X1) + 3(X2) = 2(0) + 3(30)$

$= 90$

Maximum Profit from selling ice cream is 90