From the given ocenario, we extract the eqt. Max, $Z = 5x_1 - 4x_2 + 3x_3$ Subject to,

$$2x_{4} + x_{2} - 6x_{3} = 20$$
 $6x_{1} + 5x_{2} + 10x_{3} \le 76$
 $8x_{4} - 3x_{2} + 6x_{3} \le 50$
 $x_{4}, x_{2}, x_{3} \ge 0$

Now, we convert the LPP into standard formula. Max, $z = 5x_1 - 4x_2 + 3x_3 + 0.x_5 + 0x_6$

Subject to, $2x_4 + x_2 - 6x_3 + x_4 = 20$ $6x_4 + 5x_2 + 10x_3 + x_5 = 76$ $8x_4 - 3x_2 + 6x_3 + x_6 = 50$ $x_4, x_2, x_3, x_4, x_5, x_6 \ge 0$

Phase-I 0 0 0 - 3 0 0 0

Auxiliary LPB

 $Max, 2^4 = 0x_1 + 0x_2 + 0x_3 + 0.x_5 + 0.x_6 - x_4$ X2 NA NG MG

Subject to,
$$2\pi y + \pi y - 6\pi y + \pi 4 = 20$$

$$2\pi y + 5\pi y + 10\pi y + \pi 5 = 76$$

$$6\pi y + 5\pi y + 6\pi y + \pi 6 = 50$$

$$8\pi y - 3\pi z + 6\pi y + \pi 6 = 50$$

So, the matrix formula AX=B, we get

chearon solar 510 = sular was dorr you x corrections

6-33:0 5/4 - 12/4 0 - 1/4

Mai - 18t - 1 0 - 18t - 18t - 0

tond

		L-XXIII
4.9	Cj	0 0 0 -1 0 0 Solution Ratio
CBi-	Barriable variable	21, 22 23 24 25 26 XB
		1 -6 1 0 0 20 10
-1	24	2 1 -6 1
		5 10 0 1 0 76 12.6
0	25	6 02 = 100 + 200
	7.	8/-3 6 0 0 1 50 6.25.
0	X6	pivot DC + OCT
	27	-7 -1 6 -1 0 0 -20
	9-21	The second secon

	1		1 N		NAME OF TAXABLE PARTY.	aug-verramenten er stellt			7
1001	Cj	0	0	0	-1	0	0	solution	Ratio
CB;	Barie Variable	74	72	7/3	NA	75	246	XB	0
-1	24	0	7/4	-15/4	1)	0	-7/4	15/2	4.29
0	25.19	0	29	11/2	0	1	-3/4	77/2	5.31
0	24	1	-3/8/	13/4	obo	0	1/8	<u>25</u> 4	The value is negative.
	对	0	-7/4	15/4	-1	0	1/4	- 15/2	
	cj-27	0	7/41	_15/4	0	0	-1/4		

formula:

new value = old value - corr. row x corr. column

pivot

CBi	Cj Barie Variable	0000 0 -1 0 0 Solution Rotto 24 22 23 24 25 26 XB	3
0	2508	0 1 - 15 4/4 0 - 1/2 30	
0	NE LE	0 0 256 -29 1 2/7 52	
0	247	11 00-4 3 9 14 55	
	2j 18	0 5=0	
	Cj-27	0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	

As, $z^*=0$ and no artificial variable appear in basis and $c_j-2j \le 0$. So, it has a femille solution and we go to phase II.

Phase-II

Consider the final simplex table of phase-I consider the actual const orsocioted with the original variables. Delete the ortificial variable x4 column from the table.

Market Control of the	-			
Cj	5	0_4 0	3 0 0 Solution Ra	tio
Borrie Variable	74	22	22 25 26 XB	143
7/2	0	10	-30 0 -1/7 30/3	0
25	0	6/6	256 1 2/7 547	0
24	1	PT 8	=6/2 -00 Tha 55	.0
25 Cj-25	5	0 -4	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
	7/2 7/5 7/4	Variable 4 N2 0 N5 0 N4 1 Zj 5	Variable 19 12 N2 0 1 N5 0 0 N4 1 0 Zij 5 -4	Borrie Variable $\frac{74}{7}$ $\frac{72}{7}$ $\frac{73}{7}$ $\frac{75}{7}$ $\frac{76}{7}$ $\frac{78}{7}$ $\frac{75}{7}$ $\frac{76}{7}$ $\frac{78}{7}$ $\frac{75}{7}$ 75

As, all
$$C_j - 2j \le 0.00$$
 biolities on bro $0 = \frac{1}{5}$ As, $\lambda_1 = \frac{130}{7}$, $\lambda_2 = \frac{130}{7}$, $\lambda_3 = 0$

: Max,
$$2 = \left(5 \times \frac{55}{7} - 4 \times \frac{30}{7} + 3 \times 0\right)^{3}$$

$$= \frac{155}{7} \cdot 11 - 300 \cdot 19$$

consider the final rently table of phone-I. consider Louigiro est this beloisons toos houter est varieties polete the artificial varieties 24

column : from the table.