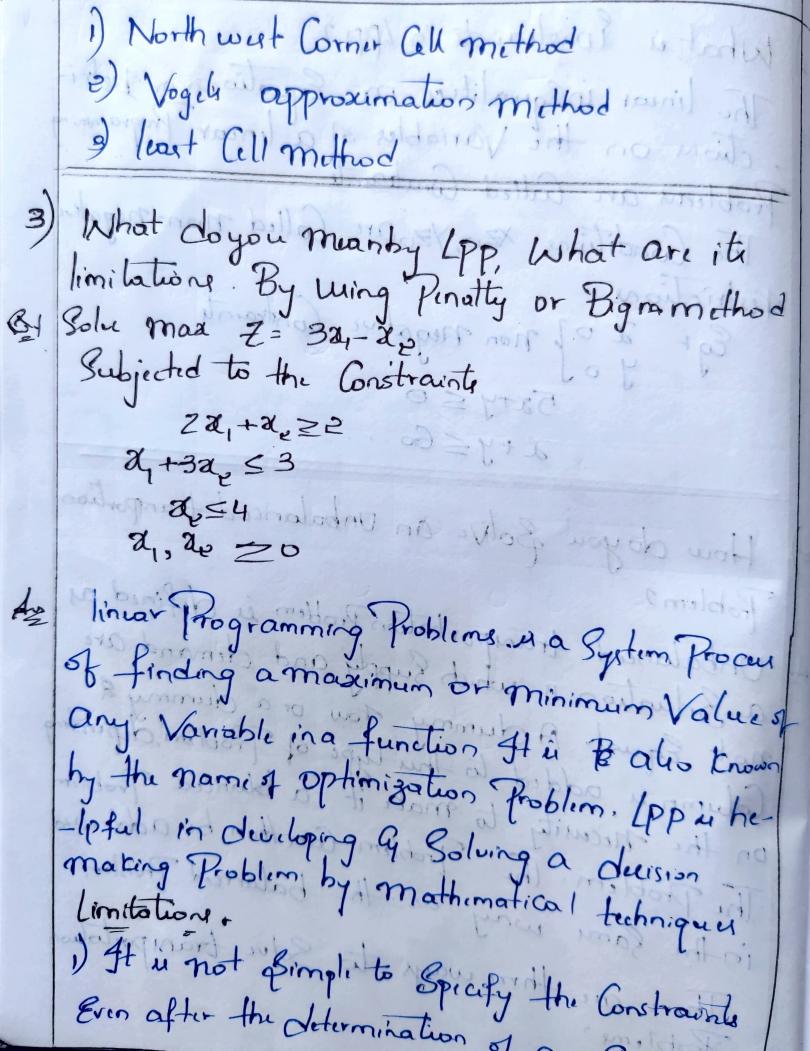
1) What is Constraints in 4PP? The linear in Equalities or Equations or Festri-tions on the Variables of a linear Programming Problems are Called Constraints. The Conditione XZO, YZO are Called non-negative Egt 20% non negative Contrainte 5x+y < 0 200 and al orbital 2+y < 60 ... S = 1 5 5 How do you folive an unbalanced transportion froblem? 4 Unbalanced transportation Problem is defined as a Situation is which Supply and demand are not Equal. A dummy tow or a dummy & Column is added to this type of Problem, depinding on the necurity to make it a blanced Problim The Problem The Problem Canthin be addrewed in the game way as the balanced Problem There are three ways to Solve transportation Problems: Eur after the determination o



function Spicifications Constraints is difficult, e) There is a Possibility that both function are linear

3) Determining the given function mathematically in a linear Programming Problem à quite difficult 4) The auumption, made are not teal since that On takes based on the Elemente in the given.
Situation ii) A) Max Z= 32,-de
Sub to + 221,+222
21,+32e =3 0 Se 1 3 0 E 1 3 0 WET 1 0 1 0 Maz Z = 32,-2, 2,+32,+5,=3 Ze+53=4 21,22,51,552, S, ZO 21=26=0 S1=-E, S6=3, S3=4

	1 10.1.								
Ant	Introduce Black, Surplusa, artificial Variably								
n	max 2=13a, -8,+05,+05,								
	Sub to + Pa, + 25-5, + A, = P								
Na Na	2,+32+52+3								
100	V. V.	2	+7	=4		0 1			TAL
F	ने स	itial	ba	iic fer	erible	Soli	itios"	ii gi	in by
3	(,, 36	, -0 ,	A, =	2, 5,	= 3,5	3= 40	0110	a one	W 191
Co	Cj	3	-1	0	0.	0	-M	801	Valia
CIST	Br	2,	کي ا	0 5,	Sp	S3	A	E kol	
	A		1	War of the same		0		5 00	1
0	Se	1	3	0	1	409	D	3	3
0	Sa	0	1-	Ö	0	١	0	4	34
2,-	Cj	-Em-	-m+1	m	0	0	022	-em	

1		Cj	3		0		000	-m	0 1	
	CBI	BV	<b>a</b> ,	Ø2	Si	Se	Sa	A	801	Talu
	3	a,	1	1/2	-16	0	D	1/2	1	ع-
1	0	Se	0	5/2	الم	a	0	-1/2	ع	4
1	0	53	D	1	0	0	1	0	4	-
	3	Cj	0	5/2	3/2	D	D	36+m	3	
1			7 65			19			15 17 m	

	Ci	38	-1 a	0	DA	D	-m	Po1	ratio
(Bj	By	a,	a <sub>e</sub>	S,	Se	S	Aı	301	raus
3	2,	1	3	D	1	D	D	3	×
0	Sı	0	5	J. F.	<u>်</u> ည	op!	The	4 0	*
0	5,	D	OV	0	D	191	0000	p lat	X
	马马	O	lo	O	3	0.	m	9	×

Thus the optimum Bd is tracked

: 2,=3, 2=0, Maz Z=9.

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0

4) Find the optimal Solo to the transportation Problem on given in the table

	0.3		31		CA1 3	1
	- الرو	D',	D	Ds	24	Ruply
	1	5	3	6	5	19
	D D	4	7	9		37
The same of	3	3	4	7.	5	34
	Hemad	16	18	31	25	125

total Supply= 19+37+34=90 total dunard = 16+18+31+25-90

All the state of the state of	to the first		all the
116	13		
5	3	8	P
	15	PI	
4	3	9	1
		10	125
		19	
2	4	1	5
		E	
1/	1/8	31-22	25
16	1.0		
0	0	= 8	0

			1.1	. 0
Lle	13			14
5	3	6	5	0130
1.	15	D2	K4	3 8
14	It	19	1 9	U2=4
1 1 /		19	(25	
3	54	7+2	5-a	U3= 2
V1=5	16-3	V3=5	, K=3	
^		1 Day your de	W TI	1 1 1 1

( of 6, 3 of

to find, Aij, we have Aij = Cij - (ui vi)

13=1; 14=-1; 1=-5, 1=-6; 131=-4,

5×26 +3×3 +7×15 + 9×22+ 9×7 + 5×25

Aug = -6 au most nigative 2=min (22,25)

5	3	6	5	Uiso
4	7	9	(ta)	W= 48
3+2	4	7	5(-1)	U=8.

13=7; DM=5 3 121=5; Des 6 ; Dal = -10 ; Dal = -7 131=-10 most-'ve SI-10

(-15, -3, -16)

2=+3

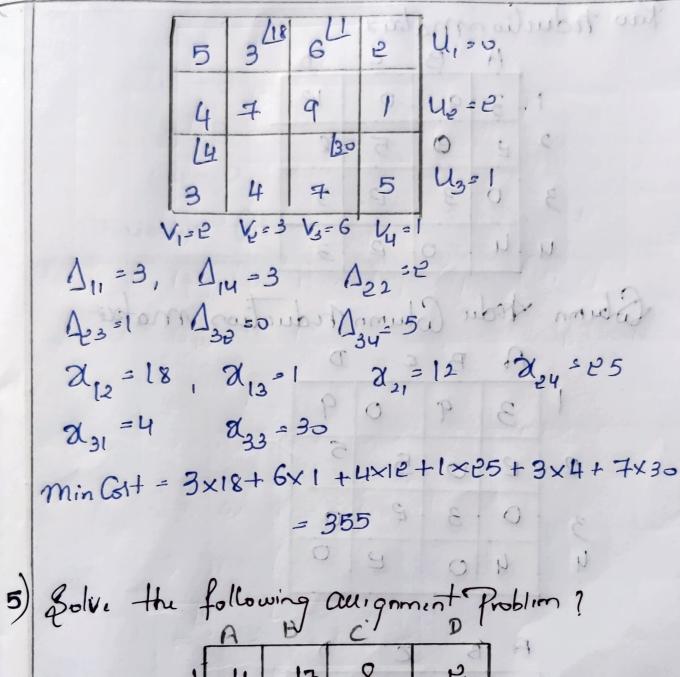
5	3	6 +8	2 25	4,20
4	7	9	b 1	U254
+8	4	7-a	5	U=-
3 ( 5	V . 2	Vea	11 3-	3

Δ,3=-3, Δ14=5, Δ21=3 De3=14, A3e=3, A3U=10  $\Delta_{13} = -3$  is most negative

(-31,-13) ×1-13

Se 19 1	341	maria	2+2	a 6 as an
	6	13	1	4,0
5	3	6	2	g aims (e)
	112		25	
1.	7	0	1	4 9 9
40		7110	200	8 8
116	]	(18		1014
3-	4	4+2	5	Uzo I
V.=P	V3	V.=6	16. 3	-3

11=3, 114=5, Do1 =-2 De3 =-1, D3==0, D34=7 Del = - 2 is most negative. (13,16,12) X=12



Bolve the following aurgnment Problem?

1 11 17 8 20

2 9 7 12 15

3 13 16 15 16

4 14 10 12 13