18-52-01

Solution (a) Obolance d transportation problem Formula

(2) Min Z = 20x1 + 24x2 + 24 X3

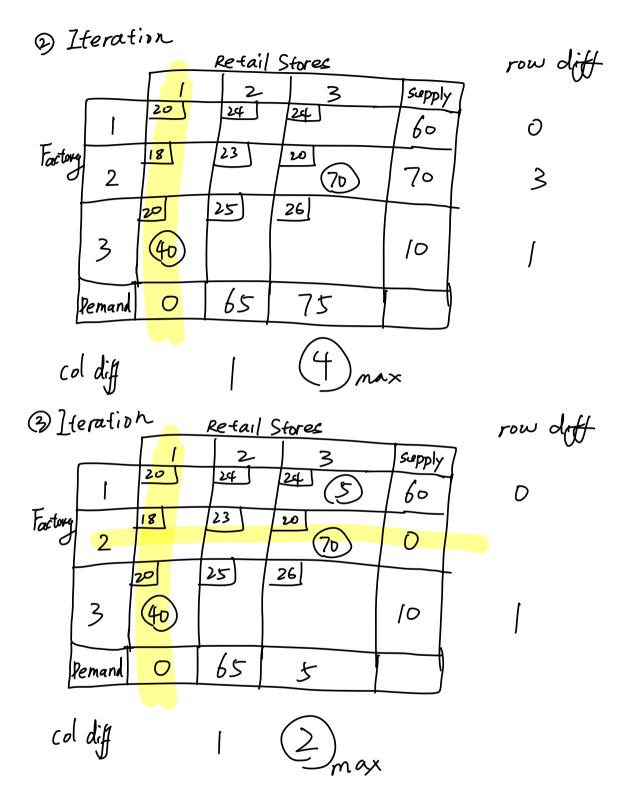
+ 18x4 + 23 X5 + 20 X6

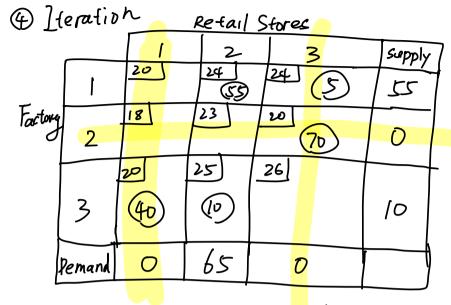
+ 20x7 + 25 X8 + 26 X9

Subject to  $\begin{cases} 20 \times 1+24 \times 2 +24 \times 3 = 60 \\ 18 \times 4 + 23 \times 1 +20 \times 6 = 70 \end{cases}$   $20 \times 7 + 125 \times 8 + 26 \times 9 = 50$   $20 \times 1 + 18 \times 4 +20 \times 7 = 40$   $24 \times 2 +23 \times 1 +25 \times 8 = 65$   $24 \times 3 +20 \times 6 +26 \times 9 = 75$   $1, \times 2, \times 3, \times 4, \times 5, \times 6, \times 7, \times 8, \times 9 \geq 0$ 

Cb) O Vogel approximation method

CD/						
Retail Stores						row diff
		1	2	3	Supply	
_	1	20	24	24	60	4
Factor	2	18	23	20	70	2
		20	25	26	+	
	3	40			50	(J) max
	Pemand	40	65	75		
رما	4:N-		•			





(5) test optimal : find the large number of basic element col, or row.

			Retail	Stores		col. or row.		
		1201	2	3	Supply	lei	7 and compute	
	1	20	<u>24</u>	24 5	60	0	Cost=Ui+Vi	
Factor	4	18	23	20	170	J - 4	cost – Ui –Vi	
C	2	3	12-1	70)	10	-4		
		20	25	26		· /		
	3	(40)	(10)	1	50			
	Pemand	40	65	75			h	
	Vi	19	24	24				

6) Since all numbers of the table are nonegative the result is optimal

## (c) System Analysis (PPT上沒有,应流不考)

			Retail	Stores	
		1	2	3	supply
	1_	20	24	24	60
Factory	2	18	23	20	70
		20	25	2645	
	3				50
	Pemand	40	65	75	