b) Modified distribution Method.

	W_1	W_2	W_3	
F_1	8	10	12	900
F_2	12	13	12	1000
F_3	14	10	11	1200
	1200	1000	900	

	W_1	W_2	W_3	
R_1	900 ① 8	10	12	900
R_2	300 ② 12	700 ③ 13	12	1000 700 0
F_3	14	300 10	900 11	1200 900
	1200 300 0	1000 300 0	900	

Occupied cell Value.

$R_1 + C_1 = 8$ $R_3 + C_2 = 10$

$R_2 + C_1 = 12$ $R_3 + C_3 = 11$

$R_2 + C_2 = 13$

$R_1 = 0 \quad C_1 = 8$

$R_2 = 4 \quad C_2 = 9$

$R_3 = 1 \quad C_3 = 10$

$R_1 + C_1 = 8$

$0 + C_1 = 8$

$C_1 = 8$

$R_2 + 8 = 12$

$R_2 + 8 = 12$

$R_2 = 12 - 8$

$R_2 = 4$

$R_2 + C_2 = 13$

$4 + C_2 = 13$

$C_2 = 13 - 4$

$C_2 = 9$

$R_3 + C_2 = 10$

$R_3 + 9 = 10$

$R_3 = 10 - 9$

$R_3 = 1$

$R_3 + C_3 = 11$

$R_3 + 1 = 11 \Rightarrow R_3 = 11 - 1 = 10$

unoccupied cell value.

$R_1 + C_2 - 10$

$R_1 + C_3 - 12$

$R_2 + C_3 - 12$

$R_3 + C_1 - 14$

(1) $R_1 + C_2 - 10$

$0 + 9 - 10 = -1$

(2) $R_1 + C_3 - 12$

$0 + 10 - 12 = -2$

(3) $R_2 + C_3 - 12$

$4 + 10 - 12 = 2$

(4) $R_3 + C_1 - 14$

$1 + 8 - 14 = -5$

(700 − 700)	0 −Q 13	700 +Q 12	(0 + 700)
(700 + 300)	1000 +Q 10	200 −Q 11	(900 − 700)

$= 0 \times 13 + 700 \times 12 + 1000 \times 10 +$

$200 \times 11 + 900 \times 8 + 300 \times 1$

$= 31400$.