

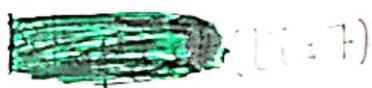
## Ejeracio # 2

Semana	Fuerza Laboral	Rangos	b1
1	6	0	b1
2	9	6,7,8,9,10,11	b2
3	6	9	b3
4	11	6,7,8,9,10,11	b4
5	8	11	b5
6	7	8	b6
7	4	7,8	b7
8	2	4,5,6,7,8	b8
9	8	2,3,4,5,6,7,8	b9
10	3	8	b10
11	7	3,4,5,6,7	b11

Costo de exceso:  $C_1(x_i - b_i) = C_1 = 550$

Costo de contratación:  $C_2(x_i - x_{i-1}) = 350$

Costo de contratación: 225



W.W.-D. 81-342 (Continued)

$$\text{Etapa } 11 \quad (b_i=7) \Rightarrow SSO(X_{i-6i}) + [225 + 350(X_i - X_{i-1})] + F_{11}(X_{10})$$

$X_{10}(X_{i-1})$	$X_i = X_{11} = 7 \text{ (require)}$ $SSO(X_{i-6i}) + [225 + 350(X_i - X_{i-1})]$	$F_{11}(X_{10})$	$X_{11}^*$
3	$SSO(7-7) + [225 + 350(7-3)] = 1625$	1625	7
4	$SSO(7-7) + [225 + 350(7-4)] = 1275$	1275	7
5	$SSO(7-7) + [225 + 350(7-5)] = 925$	925	7
6	$SSO(7-7) + [225 + 350(7-6)] = 575$	575	7
7	$SSO(7-7) + 0 + 0 = 0$	0	7

$$\text{Etapa } 10 \quad (b_i=3) \Rightarrow SSO(X_{i-6i}) + [225 + 350(X_i - X_{i-1})] + F_{10}(X_{10})$$

$X_9(X_{i-1})$	$X_i = X_{10} = 3$	$X_i = X_{10} = 4$	$X_i = X_{10} = 5$	$X_i = X_{10} = 6$	$X_i = X_{10} = 7$	$F_{10}(X_9)$	$X_{10}^*$
8	$SSO(3-3) + 0 + 1625 = 1625$	$SSO(4-3) + 0 + 1275 = 1825$	$SSO(5-3) + 0 + 925 = 2025$	$SSO(6-3) + 0 + 575 = 2225$	$SSO(7-3) + 0 + 0 = 2200$	1625	3

$$\text{Etapa } 9 \quad (b_i=8) \Rightarrow SSO(X_{i-6i}) + [225 + 350(X_i - X_{i-1})] + F_{10}(X_9)$$

$X_8(X_{i-1})$	$X_i = X_9 = 8$	$F_9(X_8)$	$X_9^*$
2	$SSO(8-8) + 225 + 350(8-2) + 1625 = 3950$	3950	8
3	$SSO(8-8) + 225 + 350(8-3) + 1625 = 3600$	3600	8
4	$SSO(8-8) + 225 + 350(8-4) + 1625 = 3250$	3250	8
5	$SSO(8-8) + 225 + 350(8-5) + 1625 = 2900$	2900	8
6	$SSO(8-8) + 225 + 350(8-6) + 1625 = 2550$	2550	8
7	$SSO(8-8) + 225 + 350(8-7) + 1625 = 2200$	2200	8
8	$SSO(8-8) + 0 + 0 + 1625 = 1625$	1625	8

Etapa 8 ( $b_i=7$ )  $\Rightarrow SSO(X_i-b_i) + [Z_2S + Z_5O(X_i-X_{i-1})] + F_9(X_8)$

$X_7(X_{i-1})$	$X_i = X_8 = 2$	$X_i = X_8 = 3$	$X_i = X_8 = 4$	$X_i = X_8 = 5$	$X_i = X_8 = 6$	$X_i = X_8 = 7$	$X_i = X_8 = 8$	$F_8(X_7)$	$X_8^*$
4	$SSO(2-2) + 0 + 3950 = 3950$	$SSO(3-2) + 0 + 3600 = 4150$	$SSO(4-2) + 0 + 3250 = 4350$	$1680 + [22S + 38O(1)] + 2900 = 5175$	$2200 + [22S + 38O(2)] + 2700 = 5675$	$2750 + [22S + 38O(3)] + 2700 = 6275$	$3300 + [22S + 38O(4)] + 1625 = 6550$	$3950$	2
5	$SSO(1-2) + 0 + 3950 = 3950$	$SSO(3-2) + 0 + 3600 = 4150$	$SSO(4-2) + 0 + 3250 = 4350$	$SSO(5-2) + 0 + 2900 = 4550$	$2200 + [22S + 38O(1)] + 2750 + [22S + 38O(2)] + 2800 = 5325$	$2750 + [22S + 38O(3)] + 1625 = 6200$	$3300 + [22S + 38O(4)] + 1625 = 6200$	$3950$	2
6	$SSO(2-2) + 0 + 3950 = 3950$	$SSO(3-2) + 0 + 3600 = 4150$	$SSO(4-2) + 0 + 3250 = 4350$	$SSO(5-2) + 0 + 2900 = 4550$	$SSO(6-2) + 0 + 2550 = 4750$	$2750 + [22S + 38O(1)] + 2700 = 5525$	$3300 + [22S + 38O(2)] + 1625 = 5850$	$3950$	2
7	$SSO(1-2) + 0 + 3950 = 3950$	$SSO(3-2) + 0 + 3600 = 4150$	$SSO(4-2) + 0 + 3250 = 4350$	$SSO(5-2) + 0 + 2900 = 4550$	$SSO(6-2) + 0 + 2550 = 4750$	$SSO(7-2) + 0 + 2200 = 4950$	$3300 + [22S + 38O(1)] + 1625 = 5500$	$3950$	2
8	$SSO(1-2) + 0 + 3950 = 3950$	$SSO(3-2) + 0 + 3600 = 4150$	$SSO(4-2) + 0 + 3250 = 4350$	$SSO(5-2) + 0 + 2900 = 4550$	$SSO(6-2) + 0 + 2550 = 4750$	$SSO(7-2) + 0 + 2200 = 4950$	$3300 + [22S + 38O(2)] + 0 + 1625 = 4925$	$3950$	2

Etapa 7 ( $b_i=4$ )  $\Rightarrow SSO(X_i-b_i) + [Z_2S + Z_5O(X_i-X_{i-1})] + F_7(X_7)$

$X_6(X_{i-1})$	$X_i = X_7 = 4$	$X_i = X_7 = 5$	$X_i = X_7 = 6$	$X_i = X_7 = 7$	$X_i = X_7 = 8$	$F_7(X_6)$	$X_7^*$
7	$SSO(4-4) + 0 + 3950 = 3950$	$SSO(5-4) + 0 + 3950 = 4500$	$SSO(6-4) + 0 + 3950 = 5050$	$SSO(7-4) + 0 + 3950 = 5600$	$2700 + [22S + 38O(1)] + 3950 = 6725$	$3950$	4
8	$SSO(4-4) + 0 + 3950 = 3950$	$SSO(5-4) + 0 + 3950 = 4500$	$SSO(6-4) + 0 + 3950 = 5050$	$SSO(7-4) + 0 + 3950 = 5600$	$SSO(8-2) + 0 + 3950 = 6150$	$3950$	4

Etapa 6 ( $b_i=7$ )  $\Rightarrow SSO(X_i-b_i) + [Z_2S + Z_5O(X_i-X_{i-1})] + F_7(X_6)$

$X_5(X_{i-1})$	$X_i = X_6 = 7$	$X_i = X_6 = 8$	$F_6(X_5)$	$X_6^*$
8	$SSO(7-7) + 0 + 3950 = 3950$	$SSO(8-7) + 0 + 3950 = 4500$	$3950$	7

Etapa 5 ( $b_i=8$ )  $\Rightarrow SSO(X_{i-b_i}) + [275 + 350(X_i - X_{i-1})] + f_6(X_5)$

$X_4(X_{i-1})$	$X_i = X_5 = 8$	$f_5(X_4)$	$X_5^*$
11	$SSO(8-8) + 0 + 3950 = 3950$	3950	8

Etapa 4 ( $b_i=11$ )  $\Rightarrow SSO(X_{i-b_i}) + [275 + 350(X_i - X_{i-1})] + f_5(X_4)$

$X_3(X_{i-1})$	$X_i = X_4 = 11$	$f_4(X_3)$	$X_4^*$
6	$SSO(11-11) + [275 + 350(11-6)] + 3950 = 5925$	5925	11
7	$SSO(11-11) + [275 + 350(11-7)] + 3950 = 5575$	5575	11
8	$SSO(11-11) + [275 + 350(11-8)] + 3950 = 5225$	5225	11
9	$SSO(11-11) + [275 + 350(11-9)] + 3950 = 4875$	4875	11
10	$SSO(11-11) + [275 + 350(11-10)] + 3950 = 4525$	4525	11
11	$SSO(11-11) + [275 + 350(11-11)] + 3950 = 3950$	3950	11

Etapa 3 ( $b_i=6$ )  $\Rightarrow SSO(X_{i-b_i}) + [275 + 350(X_i - X_{i-1})] + f_4(X_3)$

$X_2(X_{i-1})$	$X_i = X_3 = 6$	$X_i = X_3 = 7$	$X_i = X_3 = 8$	$X_i = X_3 = 9$	$X_i = X_3 = 10$	$X_i = X_3 = 11$	$f_3(X_2)$	$X_3^*$
9	$SSO(6-6) + 0 + 5925 = 5925$	$SSO(7-6) + 0 + 5575 = 5575$	$SSO(8-6) + 0 + 5225 = 5225$	$SSO(9-6) + 0 + 4875 = 4875$	$2750 + [275 + 350(1)] + 4525 = 7300$	$2750 + [275 + 350(2)] + 3950 = 7625$	5925	6
10	$SSO(6-6) + 0 + 5925 = 5925$	$SSO(7-6) + 0 + 5575 = 5575$	$SSO(8-6) + 0 + 5225 = 5225$	$SSO(9-6) + 0 + 4875 = 4875$	$SSO(10-6) + 0 + 4525 = 6725$	$2750 + [275 + 350(1)] + 3950 = 7275$	5925	6
11	$SSO(6-6) + 0 + 5925 = 5925$	$SSO(7-6) + 0 + 5575 = 5575$	$SSO(8-6) + 0 + 5225 = 5225$	$SSO(9-6) + 0 + 4875 = 4875$	$SSO(10-6) + 0 + 4525 = 6725$	$SSO(11-6) + 0 + 3950 = 6700$	5925	6

Etapu 2 ( $b_i = 9$ )  $\Rightarrow sso(x_i - b_i) + [225 + 350(x_i - x_{i-1})] + f_2(x_i)$

$x_1(x_{i-1})$	$x_i = x_2 = 9$	$x_i = x_2 = 10$	$x_i = x_2 = 11$	$f_2(x_i)$	$x_i^*$
6	$sso(9-9) + [225 + 350(7)] + 5925 = 7200$	$sso(10-9) + [225 + 350(4)] + 5925 = 8100$	$sso(11-9) + [225 + 350(5)] + 5925 = 9025$	7200	9
7	$sso(9-9) + [225 + 350(2)] + 5925 = 6850$	$sso(10-9) + [225 + 350(7)] + 5925 = 7750$	$sso(11-9) + [225 + 350(4)] + 5925 = 8650$	6850	9
8	$sso(9-9) + [225 + 350(1)] + 5925 = 6500$	$sso(10-9) + [225 + 350(2)] + 5925 = 7400$	$sso(11-9) + [225 + 350(3)] + 5925 = 8300$	6800	9
9	$sso(9-9) + 0 + 5925 = 5925$	$sso(10-9) + [225 + 350(1)] + 5925 = 7050$	$sso(11-9) + [225 + 350(2)] + 5925 = 7950$	5925	9
10	$sso(9-9) + 0 + 5925 = 5925$	$sso(10-9) + 0 + 5925 = 6475$	$sso(11-9) + [225 + 350(1)] + 5925 = 7600$	5925	9
11	$sso(9-9) + 0 + 5925 = 5925$	$sso(10-9) + 0 + 5925 = 6475$	$sso(11-9) + 0 + 5925 = 7025$	5925	9

Etapu 1 ( $b_i = 6$ )  $\Rightarrow sso(x_i - b_i) + [225 + 350(x_i - x_{i-1})] + f_2(x_i)$

$x_0(x_{i-1})$	$x_i = x_1 = 6$	$x_i = x_1 = 7$	$x_i = x_1 = 8$	$x_i = x_1 = 9$	$x_i = x_1 = 10$	$x_i = x_1 = 11$	$f_1(x_0)$	$x_i^*$
0	$0 + [225 + 350(6)] + 7750 = 9525$	$550 + [225 + 350(7)] + 6850 = 10075$	$1100 + [225 + 350(8)] + 6500 = 10625$	$1650 + [225 + 350(9)] + 5925 = 10950$	$2200 + [225 + 350(10)] + 5925 = 11850$	$2750 + [225 + 350(11)] + 5925 = 12750$	9525	6

# Respuesta

Semana	Fuerza laboral	Modelo estimación
1	6	6 contrata 6
2	9	9 contrata 3
3	6	6 despide 3
4	11	11 contrata 5
5	8	8 despide 3
6	7	7 despide 1
7	4	4 despide 3
8	2	2 despide 2
9	8	8 contrata 6
10	3	3 despide 5
11	7	7 contrata 4

Costo total : 9525.