



Parcial 1.

\* Pegar enunciados

\* Pedirle a Victor el de ORD.

1. Contratar + personal. lotes de 50 cajas de 100 sobres. cada lote es 1 h.

50 cajas  $\rightarrow$  1 h  $\rightarrow$  8 horas 5 días a la semana 4 semanas.

$\hookrightarrow$  Coste mano de obra = 35€

$\hookrightarrow$  Coste mat. prime = 6'5 por caja

Prod. sobrente = 12% coste prod Demand. insatisfe = 25% coste pro. Pvente = 40% + coste pro

1 h  $\rightarrow \frac{35}{50} = 0'7$  cajas a hora

$\hookrightarrow$  coste prod = 6'5 + 0'7 = 7'2

$\hookrightarrow$  Prod. sobrente = 12%  $\cdot$  7'2 = 0'864

$\hookrightarrow$  Demand. insatisfe = 25%  $\cdot$  7'2 = 1'8

$\hookrightarrow$  Pvente = 7'2 + (40%  $\cdot$  7'2) = 10'08

¿1º empleados?

1 trab = 1 h  $\cdot$  8 h  $\cdot$  5 d  $\cdot$  4 = 160 h  $\cdot$  50 = 8000

2 trab = 8000  $\cdot$  2 = 16000  $\rightarrow$  Falta 500 para 16500

3 trab = 8000  $\cdot$  3 = 24000  $\rightarrow$  añadido + trab hasta cubrir 16500

$$\#1 (7500 \cdot 10'08) - (8000 \cdot 7'2) - (500 \cdot 0'864)$$

$$\#2 (8000 \cdot 10'08) - (8000 \cdot 7'2) - (8500 \cdot 1'8)$$

$$\#3 (7500 \cdot 10'08) - (16000 \cdot 7'2) - (8500 \cdot 0'864)$$

$$\#4 (16000 \cdot 10'08) - (16000 \cdot 7'2) - (500 \cdot 1'8)$$

$$\#5 (7500 \cdot 10'08) - (24000 \cdot 7'2) - (16500 \cdot 0'864)$$

$$\#6 (16500 \cdot 10'08) - (24000 \cdot 7'2) - (7500 \cdot 0'864)$$

|       | Demanda       |              |
|-------|---------------|--------------|
|       | 7500          | 16500        |
| 8000  | 17568 $\#1$   | 7740 $\#2$   |
| 16000 | -48944 $\#3$  | 45180 $\#4$  |
| 24000 | -111456 $\#5$ | -12960 $\#6$ |



¿Cuanto incrementa p según savage para 2 empleados?

1º Coste oportunidad

|       | 7500   | 16500 | WALD   |
|-------|--------|-------|--------|
| 8000  | 0      | 37440 | 37440  |
| 16000 | 64512  | 0     | 64512  |
| 24000 | 129024 | 58140 | 129024 |

Si quiere contratar 2.

la posición del 2º mcb

Donde sea menor.

$$(7500 \cdot p) - (16000 \cdot 7'2) - (8500 \cdot 0'1864) \geq 17568 - 37440 \geq -19872$$

$$7500 p - 122544 \geq -19872; p = 13'69$$

|       | 7500   | 16500 | WALD   |
|-------|--------|-------|--------|
| 8000  | 0      | 37440 | 37440  |
| 16000 | 64512  | 0     | 64512  |
| 24000 | 129024 | 58140 | 129024 |

|       | 7500   | 16500 | WALD   |
|-------|--------|-------|--------|
| 8000  | 0      | 37440 | 37440  |
| 16000 | 64512  | 0     | 64512  |
| 24000 | 129024 | 58140 | 129024 |

2. Fito, Fede, Fren y Fabio. Emp sin beca, si no este fito y fabio o fede y fren  
 Fede y fren 2000. Fito y Fabio 3200. Si unan 4500, beca 6500 ¿Beca, fede y fito?

$P = \frac{s!(n-s-1)!}{n!}$

| S           | v(S) | $P_3(S)$ | $X_1$                         | $X_2$                         | $X_3$                         | $X_4$                         |
|-------------|------|----------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| $\emptyset$ | 0    | 1/4      | 0                             | 0                             | 0                             | 0                             |
| {1}         | 0    | 1/12     | -                             | 0                             | 0                             | 3200                          |
| {2}         | 0    | 1/12     | 0                             | -                             | 2000                          | 0                             |
| {3}         | 0    | 1/12     | 0                             | 2000                          | -                             | 0                             |
| {4}         | 0    | 1/12     | 3200                          | 0                             | 0                             | -                             |
| {1,2}       | 0    | 1/12     | -                             | -                             | 4500                          | 4500                          |
| {1,3}       | 0    | 1/12     | -                             | 4500                          | -                             | 4500                          |
| {1,4}       | 3200 | 1/12     | -                             | 1300                          | 1300                          | -                             |
| {2,3}       | 2000 | 1/12     | 2500                          | -                             | -                             | 2500                          |
| {2,4}       | 0    | 1/12     | 4500                          | -                             | 4500                          | -                             |
| {3,4}       | 0    | 1/12     | 4500                          | 4500                          | -                             | -                             |
| {1,2,3}     | 4500 | 1/4      | -                             | -                             | -                             | 2000                          |
| {1,2,4}     | 4500 | 1/4      | -                             | -                             | 2000                          | -                             |
| {1,3,4}     | 4500 | 1/4      | -                             | 2000                          | -                             | -                             |
| {2,3,4}     | 4500 | 1/4      | 2000                          | -                             | -                             | -                             |
| {1,2,3,4}   | 6500 |          | $\frac{1725}{6500} \cdot 100$ | $\frac{1525}{6500} \cdot 100$ | $\frac{1525}{6500} \cdot 100$ | $\frac{1725}{6500} \cdot 100$ |
|             |      |          | 26.54%                        | 23.46%                        | 23.46%                        | 26.54%                        |

fito

fede

**SIGUE ESTUDIANDO,  
HASTA LLEGAR A SER QUIÉN SIEMPRE HAS QUERIDO.**

3.

|        | F1   | F2     | F3     | F4     | F5     | $\Phi^+$ | $\Phi^-$ |    |
|--------|------|--------|--------|--------|--------|----------|----------|----|
| F1     | -    | 0'18   | 0'5    | 0'5    | 0'4    | 0'345    | 0'285    | 1° |
| F2     | 0'24 | -      | 0'45   | 0'45   | 0'1    | 0'335    | 0'2775   | 2° |
| F3     | 0'05 | 0      | -      | 0'1    | 0'15   | 0'075    | -0'2625  | 5° |
| F4     | 0'05 | 0'05   | 0'2    | -      | 0'4    | 0'175    | -0'1125  | 3° |
| F5     | 0    | 0      | 0'2    | 0'1    | -      | 0'075    | -0'1875  | 4° |
| $\Phi$ | 0'11 | 0'0575 | 0'3375 | 0'2875 | 0'2625 |          |          |    |

Entre F1 y F2  $\Rightarrow F1 \geq F2$

Entre F1 y F3  $\Rightarrow F1 > F3$

Entre F1 y F4  $\Rightarrow F1 > F4$

Entre F1 y F5  $\Rightarrow F1 > F5$

Entre F2 y F3  $\Rightarrow F2 > F3$

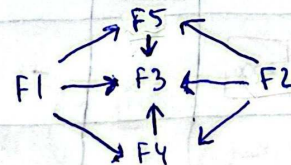
Entre F2 y F4  $\Rightarrow F2 > F4$

Entre F2 y F5  $\Rightarrow F2 > F5$

Entre F3 y F4  $\Rightarrow F3 < F4$

Entre F3 y F5  $\Rightarrow F3 < F5$

Entre F4 y F5  $\Rightarrow F4 \geq F5$



F1 - F2 - F4 - F5 - F3



**TODOS  
NECESITAMOS  
UNA SEÑAL  
PARA SEGUIR**



**AQUARIUS**

\*AQUARIUS ES FUENTE DE ZINC Y SELENO

AQUARIUS es una marca registrada de The Coca-Cola Company®

WUOLAH

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4 Equilibrio de Nash para B y valor del juego.

|       |    | Emp B     |           |           |           |
|-------|----|-----------|-----------|-----------|-----------|
|       |    | B1        | B2        | B3        | B4        |
| Emp A | A1 | (15, -15) | (-15, 15) | (60, 30)  | (12, -40) |
|       | A2 | (-20, 10) | (15, -10) | (30, -50) | (20, -10) |
|       | A3 | (-10, 10) | (20, -20) | (10, -25) | (30, -30) |

=>

|    | B1        | B2        | B3                   | B4                   |
|----|-----------|-----------|----------------------|----------------------|
| A1 | (15, -15) | (-15, 15) | <del>(60, 30)</del>  | <del>(12, -40)</del> |
| A3 | (-10, 10) | (20, -20) | <del>(10, -25)</del> | <del>(30, -30)</del> |

=>

|    | B1        | B2        |
|----|-----------|-----------|
| A1 | (15, -15) | (-15, 15) |
| A3 | (-10, 10) | (20, -20) |

Emp B

|     | B1   | B2  | MIN                        |
|-----|------|-----|----------------------------|
| A1  | 15   | -15 | -15                        |
| A3  | -10  | 20  | (-10) $\rightarrow$ maxmin |
| MAX | (15) | 20  |                            |

$\hookrightarrow$  minimax Como  $\text{minimax} \neq \text{maxmin} \rightarrow$  no equilibrio puro.

Para emp A

max: v

sa  $v \leq 15x_1 - 10x_2$

$v \leq -15x_1 + 20x_2$

$x_1 + x_2 = 1$

$x_0, x_2 \geq 0$

max v

sa:  $v \leq 15x_1 - 10(1-x_1)$

$v \leq -15x_1 + 20(1-x_1)$

$0 \leq x_1 \leq 1$

max v

sa  $v \leq 25x_1 - 10$

$v \leq -35x_1 + 20$

$0 \leq x_1 \leq 1$

Puede en B.

$$\begin{array}{l}
 \min w \\
 w \geq 15y_1 - 15y_2 \\
 w \geq 10y_1 + 20y_2 \\
 y_1 + y_2 = 1 \\
 y_1, y_2 \geq 0
 \end{array}
 \left\{ \begin{array}{l}
 \min w \\
 w \geq 15y_1 - 15(1-y_1) \\
 w \geq 10y_1 + 20(1-y_1) \\
 0 \leq y_1 \leq 1
 \end{array} \right\}
 \rightarrow
 \begin{array}{l}
 \min w \\
 w \geq 30y_1 - 15 \\
 w \geq -30y_1 + 20 \\
 0 \leq y_1 \leq 1
 \end{array}$$

$$30y_1 - 15 = -30y_1 + 20; 30y_1 + 30y_1 = 20 + 15; 60y_1 = 35; y_1 = 0.583$$

$$58.3\%$$

El valor de  $w = 2.5 \rightarrow$  lo que pierde B.

$$y_2 = 0.416 = 41.6\%$$

|   |     |     |
|---|-----|-----|
|   | 0   | 1   |
| 0 | 15  | 20  |
| 1 | -15 | -10 |

$$\begin{array}{l}
 10x + 20y = 20 \\
 15x + 10y = 15 \\
 x \geq 0, y \geq 0
 \end{array}
 \left\{ \begin{array}{l}
 (x-1)/20 - (x-1)/10 \\
 (x-1)/20 - (x-1)/10 \\
 12x + 10y = 12
 \end{array} \right\}$$



# PARCIAL 2.

1. Calcular equilibrios para jugador B, y valores del juego.

|    | JB        |           |            |
|----|-----------|-----------|------------|
|    | B1        | B2        | B3         |
| A1 | (15, -15) | (-20, 30) | (-10, 10)  |
| A2 | (-15, 15) | (15, -10) | (-20, -10) |
| A3 | (60, -30) | (30, -50) | (10, -25)  |
| A4 | (12, -40) | (20, -20) | (30, -30)  |

|    | JB        |           |           |
|----|-----------|-----------|-----------|
|    | B1        | B2        | B3        |
| A3 | (60, -30) | (30, -50) | (10, -25) |
| A4 | (12, -40) | (20, -20) | (30, -30) |

|    | B2        | B3        |
|----|-----------|-----------|
| A3 | (30, -50) | (10, -25) |
| A4 | (20, -20) | (30, -30) |

no tras some rule, no equilibrio mixto

|    | B2        | B3        |
|----|-----------|-----------|
| A3 | (30, -50) | (10, -25) |
| A4 | (20, -20) | (30, -30) |



2. 1 lote = 50 cajas

↳ 1 h → 8 h 5 días 4 semanas

↳ Coste mano de obra en 1 h = 35€

↳ Mat prim = 6'5

↳ Prod. sobrante = 12% coste prod

↳ Demanda instalis = 25% coste prod

↳ Pventa = 40% + coste prod

$$1h \rightarrow \frac{35}{50} = 0'7$$

↳ coste prod = 6'5 + 0'7 = 7'2

↳ Prod. sobrante = 0'864

↳ Demanda inst = 1'8

↳ Pventa = 10'08

Los trab. → horas = 160 · 50 = 8000 - 1 h

$$2 \text{ trab} = 8000 \cdot 2 = 16000$$

$$3 \text{ trab} = 8000 \cdot 3 = 24000$$

$$\#^1 (7500 \cdot 10'08) - (8000 \cdot 7'2) - (500 \cdot 0'864)$$

$$\#^2 (8000 \cdot 10'08) - (8000 \cdot 7'2) - (8500 \cdot 1'8)$$

$$\#^3 (7500 \cdot 10'08) - (16000 \cdot 7'2) - (8500 \cdot 0'864)$$

$$\#^4 (16000 \cdot 10'08) - (16000 \cdot 7'2) - (500 \cdot 1'8)$$

$$\#^5 (7500 \cdot 10'08) - (24000 \cdot 7'2) - (16500 \cdot 0'864)$$

$$\#^6 (16500 \cdot 10'08) - (24000 \cdot 7'2) - (7500 \cdot 0'864)$$

|       | 7500           | 16500         |
|-------|----------------|---------------|
| 8000  | 17568 $\#^1$   | 7740 $\#^2$   |
| 16000 | -46944 $\#^3$  | 45180 $\#^4$  |
| 24000 | -111456 $\#^5$ | -12960 $\#^6$ |

POE  $\rightarrow$  Coste Oportunidad

|       | p      | 1-p   | q                      |
|-------|--------|-------|------------------------|
|       | 7500   | 16500 |                        |
| 8000  | 0      | 37440 | $37440(1-p)$           |
| 16000 | 64512  | 0     | $64512p$               |
| 24000 | 129024 | 58140 | $129024p + 58140(1-p)$ |

$$37440(1-p) \leq 64512p; 37440 - 37440p \leq 64512p;$$

$$37440 = 101952p; p = 0.36 \approx 36.72\%$$

$$q = 0.63 \approx 63.28\%$$

# SIGUE ESTUDIANDO, HASTA LLEGAR A SER QUIÉN SIEMPRE HAS QUERIDO.

3 Fito, <sup>1</sup>Fede, <sup>2</sup>Frn y <sup>3</sup>Fabio, <sup>2</sup>Fede y <sup>3</sup>Frn = 2200      <sup>1</sup>Fito y <sup>4</sup>Fabio = 1750

Unidos 4500, todos 6500      Bn de Frn y Fabio

| S         | v(S) | P <sub>i</sub> (S <sub>i</sub> ) | X <sub>1</sub>                              | X <sub>2</sub>                              | X <sub>3</sub>                              | X <sub>4</sub>                              |
|-----------|------|----------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|
| ∅         | 0    | 1/4                              | 0                                           | 0                                           | 0                                           | 0                                           |
| {1}       | 0    | 1/12                             | -                                           | 0                                           | 0                                           | 1750                                        |
| {2}       | 0    | 1/12                             | 0                                           | -                                           | 2200                                        | 0                                           |
| {3}       | 0    | 1/12                             | 0                                           | 2200                                        | -                                           | 0                                           |
| {4}       | 0    | 1/12                             | 1750                                        | 0                                           | 0                                           | -                                           |
| {1,2}     | 0    | 1/12                             | -                                           | -                                           | 4500                                        | 4500                                        |
| {1,3}     | 0    | 1/12                             | -                                           | 4500                                        | -                                           | 4500                                        |
| {1,4}     | 1750 | 1/12                             | -                                           | 2750                                        | 2750                                        | -                                           |
| {2,3}     | 2200 | 1/12                             | 2300                                        | -                                           | -                                           | 2300                                        |
| {2,4}     | 0    | 1/12                             | 4500                                        | -                                           | 4500                                        | -                                           |
| {3,4}     | 0    | 1/12                             | 4500                                        | 4500                                        | -                                           | -                                           |
| {1,2,3}   | 4500 | 1/4                              | -                                           | -                                           | -                                           | 2000                                        |
| {1,2,4}   | 4500 | 1/4                              | -                                           | -                                           | 2000                                        | -                                           |
| {1,3,4}   | 4500 | 1/4                              | -                                           | 2000                                        | -                                           | -                                           |
| {2,3,4}   | 4500 | 1/4                              | 2000                                        | -                                           | -                                           | -                                           |
| {1,2,3,4} | 6500 |                                  | $\frac{1587.5}{6500} \cdot 100$<br>" 24.42% | $\frac{1662.5}{6500} \cdot 100$<br>" 25.57% | $\frac{1662.5}{6500} \cdot 100$<br>" 25.57% | $\frac{1587.5}{6500} \cdot 100$<br>" 24.42% |

#### 4. Ordene altern

|          | F1     | F2     | F3     | F4     | F5   | $\Phi^+$ | $\Phi^-$ |       |
|----------|--------|--------|--------|--------|------|----------|----------|-------|
| F1       | -      | 0'35   | 0'45   | 0'1    | 0'34 | 0'31     | 0'2525   | 2°    |
| F2       | 0      | -      | 0'1    | 0'15   | 0'05 | 0'075    | -0'2375  | 4°/5° |
| F3       | 0'05   | 0'2    | -      | 0'5    | 0'05 | 0'2      | -0'0875  | 3°    |
| F4       | 0      | 0'2    | 0'1    | -      | 0    | 0'075    | -0'2375  | 4°/5° |
| F5       | 0'18   | 0'5    | 0'5    | 0'5    | -    | 0'42     | 0'31     | 1°    |
| $\Phi^-$ | 0'0575 | 0'3125 | 0'2875 | 0'3125 | 0'11 |          |          |       |

Entre F1 y F2  $\Rightarrow F1 > F2$

Entre F1 y F3  $\Rightarrow F1 > F3$

Entre F1 y F4  $\Rightarrow F1 > F4$

Entre F1 y F5  $\Rightarrow F1 \approx F5$

Entre F2 y F3  $\Rightarrow F2 < F3$

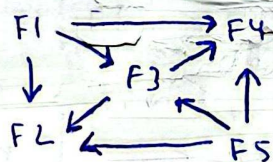
Entre F2 y F4  $\Rightarrow F2 \approx F4$

Entre F2 y F5  $\Rightarrow F2 < F5$

Entre F3 y F4  $\Rightarrow F3 > F4$

Entre F3 y F5  $\Rightarrow F3 < F5$

Entre F4 y F5  $\Rightarrow F4 < F5$



$F5 - F1 - F3 - F4/F5$

# Parcial 3.

1. Fito, Fede, Fran y Fabio. Fede y Fabio = 2200 Fito y Fran = 1750

Se une el es 4500, y todos 6500 ¿Fran y Fede?

| $s$           | $v(s)$ | $P_v(s)$ | $X_1$                                          | $X_2$                                          | $X_3$                                          | $X_4$                                          |
|---------------|--------|----------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|
| $\emptyset$   | 0      | $1/4$    | 0                                              | 0                                              | 0                                              | 0                                              |
| $\{1\}$       | 0      | $1/12$   | -                                              | 0                                              | 1750                                           | 0                                              |
| $\{2\}$       | 0      | $1/12$   | 0                                              | -                                              | 0                                              | 2200                                           |
| $\{3\}$       | 0      | $1/12$   | 1750                                           | 0                                              | -                                              | 0                                              |
| $\{4\}$       | 0      | $1/12$   | 0                                              | 2200                                           | 0                                              | -                                              |
| $\{1,2\}$     | 0      | $1/12$   | -                                              | -                                              | 4500                                           | 4500                                           |
| $\{1,3\}$     | 1750   | $1/12$   | -                                              | 2250                                           | -                                              | 2250                                           |
| $\{1,4\}$     | 0      | $1/12$   | -                                              | 4500                                           | 4500                                           | -                                              |
| $\{2,3\}$     | 0      | $1/12$   | 4500                                           | -                                              | -                                              | 4500                                           |
| $\{2,4\}$     | 2200   | $1/12$   | 2300                                           | -                                              | 2300                                           | -                                              |
| $\{3,4\}$     | 0      | $1/12$   | 4500                                           | 4500                                           | -                                              | -                                              |
| $\{1,2,3\}$   | 4500   | $1/4$    | -                                              | -                                              | -                                              | 2000                                           |
| $\{1,2,4\}$   | 4500   | $1/4$    | -                                              | -                                              | 2000                                           | -                                              |
| $\{1,3,4\}$   | 4500   | $1/4$    | -                                              | 2000                                           | -                                              | -                                              |
| $\{2,3,4\}$   | 4500   | $1/4$    | 2000                                           | -                                              | -                                              | -                                              |
| $\{1,2,3,4\}$ | 6500   |          | $\frac{1581.5}{6500} \cdot 100$<br>"<br>24.42% | $\frac{1662.5}{6500} \cdot 100$<br>"<br>25.57% | $\frac{1783.5}{6500} \cdot 100$<br>"<br>27.44% | $\frac{1662.5}{6500} \cdot 100$<br>"<br>25.57% |
|               |        |          | Fede                                           | Fran                                           |                                                |                                                |

**SIGUE ESTUDIANDO,  
HASTA LLEGAR A SER QUIÉN SIEMPRE HAS QUERIDO.**

2.

|        | F1     | F2     | F3     | F4     | F5   | $\Phi^t$ | $\Phi$   |       |
|--------|--------|--------|--------|--------|------|----------|----------|-------|
| F1     | -      | 0'35   | 0'45   | 0'1    | 0'34 | 0'31     | 0'2525   | 2°    |
| F2     | 0      | -      | 0'1    | 0'15   | 0'05 | 0'075    | -0'12375 | 4°/5° |
| F3     | 0'05   | 0'2    | -      | 0'5    | 0'05 | 0'2      | -0'0875  | 3°    |
| F4     | 0      | 0'2    | 0'1    | -      | 0    | 0'075    | -0'2375  | 4°/5° |
| F5     | 0'18   | 0'5    | 0'5    | 0'5    | -    | 0'42     | 0'31     | 1°    |
| $\Phi$ | 0'0575 | 0'3125 | 0'2875 | 0'3125 | 0'11 |          |          |       |

Entre F1 y F2  $\Rightarrow F1 > F2$

Entre F1 y F3  $\Rightarrow F1 > F3$

Entre F1 y F4  $\Rightarrow F1 > F4$

Entre F1 y F5  $\Rightarrow F1 \approx F5$

Entre F2 y F3  $\Rightarrow F2 < F3$

Entre F2 y F4  $\Rightarrow F2 \approx F4$

Entre F2 y F5  $\Rightarrow F2 < F5$

Entre F3 y F4  $\Rightarrow F3 > F4$

Entre F3 y F5  $\Rightarrow F3 < F5$

Entre F4 y F5  $\Rightarrow F4 < F5$



F5 - F1 - F3 - F2/F4

3 1 lote  $\rightarrow$  50 cajas

$\hookrightarrow$  1 h  $\rightarrow$  8 h 5 días 4 semanas

$\hookrightarrow$  Coste 1h = 35

$\hookrightarrow$  Coste mat. prim = 6'5

Prod sobrente : 12% cost prod

Demanda insatis = 25% cost prod

Pvent = 40% sobre  
coste pro

$$1h \rightarrow \frac{35}{50} = 0'7$$

$$\hookrightarrow \text{Coste pro} = 6'5 + 0'7 = 7'2$$

$$\hookrightarrow \text{Prod. sobrente} = 0'864$$

$$\hookrightarrow \text{Demanda insat} = 1'8$$

$$\hookrightarrow \text{Pventa} = 10'08$$

Horas trabajando

$$1 \text{ trab} = 8 \cdot 5 \cdot 4 \cdot 50 = 8000$$

$$2 \text{ trab} = 8000 \cdot 2 = 16000$$

$$3 \text{ trab} = 8000 \cdot 3 = 24000$$

$$\#^1 (7500 \cdot 10'08) - (8000 \cdot 7'2) - (500 \cdot 0'864)$$

$$\#^1 (8000 \cdot 10'08) - (8000 \cdot 7'2) - (8500 \cdot 1'8)$$

$$\#^2 (7500 \cdot 10'08) - (16000 \cdot 7'2) - (8500 \cdot 0'864)$$

$$\#^1 (16000 \cdot 10'08) - (16000 \cdot 7'2) - (500 \cdot 1'8)$$

$$\#^5 (7500 \cdot 10'08) - (24000 \cdot 7'2) - (16500 \cdot 0'864)$$

$$\#^1 (16500 \cdot 10'08) - (24000 \cdot 7'2) - (7500 \cdot 0'864)$$

|       | 7500           | 16500         |
|-------|----------------|---------------|
| 8000  | 17568 $\#^1$   | 7740 $\#^2$   |
| 16000 | -46944 $\#^3$  | 45180 $\#^1$  |
| 24000 | -111456 $\#^5$ | -12960 $\#^6$ |

POE

|       | 0'3    | 0'1   |                                                               |
|-------|--------|-------|---------------------------------------------------------------|
|       | 7500   | 16500 |                                                               |
| 8000  | 0      | 37440 | 26108                                                         |
| 16000 | 64512  | 0     | 19373'6 $\rightarrow$ El mejor $\rightarrow$ Calcular Pventa? |
| 24000 | 129024 | 58140 | 79405'2                                                       |