UNIVERSIDAD INTERAMERICANA PARA EL DESARROLLO. UNID
CAMPUS TUXPAN, VER
ING. SOFTWARE Y SISTEMAS COMPUTACIONALES
SEMANA 7 ACTIVIDADES
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DOCENTE:
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MODULO:
ALGEBRA LINEAL Y CALCULO VECTORIAL
25/10/2024

① $\begin{bmatrix} 3 & 10 & -7 \\ -4 & -3 & 10 \\ 2 & -2 & 5 \end{bmatrix}^{-1}$

$$\left[\begin{array}{ccc|ccc} 3 & 10 & -7 & 1 & 0 & 0 \\ -4 & -3 & 10 & 0 & 1 & 0 \\ 2 & -2 & 5 & 0 & 0 & 1 \end{array}\right]$$

$*-3/2\,F_3 + F_1 \qquad *2\,F_3 + F_2$

$$\left[\begin{array}{ccc|ccc} 0 & 13 & -29/2 & 1 & 0 & 3/2 \\ 0 & -7 & 20 & 0 & 1 & 2 \\ 2 & -2 & 5 & 0 & 0 & 1 \end{array}\right]$$

$*13/7\,F_2 + F_1 \qquad *-2/7\,F_2 + F_3$

$$\left[\begin{array}{ccc|ccc} 0 & 0 & 317/14 & 1 & 13/7 & 31/14 \\ 0 & -7 & 20 & 0 & 1 & 2 \\ 2 & 0 & -5/7 & 0 & -2/7 & 3/7 \end{array}\right]$$

$F_1 / 317/14$

$$\left[\begin{array}{ccc|ccc} 0 & 0 & 1 & 14/317 & 26/317 & 31/317 \\ 0 & -7 & 20 & 0 & 2 & \\ 2 & 0 & -5/7 & 0 & -2/7 & 3/7 \end{array}\right]$$

$*-20\,F_1 + F_2 \qquad 5/7\,F_1 + F_3$

$$\left[\begin{array}{ccc|ccc} 0 & 0 & 1 & 14/317 & 20/317 & 31/317 \\ 0 & -7 & 0 & -280/317 & -203/317 & 14/317 \\ 2 & 0 & 0 & 10/317 & -72/317 & 150/317 \end{array}\right]$$

$F_2/-7 \qquad F_3/2$

$$\left[\begin{array}{ccc|ccc} 0 & 0 & 1 & 14/317 & 20/317 & 31/317 \\ 0 & 1 & 0 & 40/317 & 29/317 & -2/317 \\ 1 & 0 & 0 & 5/317 & 36/317 & 79/317 \end{array}\right]$$

Reordenar

$$\left[\begin{array}{ccc|ccc} 1 & 0 & 0 & 5/317 & -36/317 & 79/317 \\ 0 & 1 & 0 & 40/317 & 29/317 & -2/317 \\ 0 & 0 & 1 & 14/317 & 26/317 & 31/317 \end{array}\right]$$

$$\begin{bmatrix} \frac{5}{317} & \frac{36}{317} & \frac{79}{317} \\ \frac{40}{317} & \frac{29}{317} & \frac{2}{317} \\ \frac{14}{317} & \frac{26}{317} & \frac{31}{317} \end{bmatrix}$$

② $\begin{bmatrix} 1 & 2 & -4 \\ -2 & -5 & 3 \\ 1 & 4 & 6 \end{bmatrix}^{-1}$

$\left[\begin{array}{ccc|ccc} 1 & 2 & -4 & 1 & 0 & 0 \\ -2 & -5 & 3 & 0 & 1 & 0 \\ 1 & 4 & 6 & 0 & 0 & 1 \end{array}\right]$

$+2f_1 + f_2$

$+1f_1 + f_3$

$\left[\begin{array}{ccc|ccc} 1 & 2 & -4 & 1 & 0 & 0 \\ 0 & -1 & -5 & 2 & 1 & 0 \\ 0 & 2 & 10 & -1 & 0 & 1 \end{array}\right]$

$*-1 f_2$

$/2 f_3$

$\left[\begin{array}{ccc|ccc} 1 & 2 & -4 & 1 & 0 & 0 \\ 0 & 1 & 5 & -2 & -1 & 0 \\ 0 & 1 & 5 & -\frac{1}{2} & 0 & \frac{1}{2} \end{array}\right]$

$*-1 f_2 + f_3$

$\left[\begin{array}{ccc|ccc} 1 & 2 & -4 & 1 & 0 & 0 \\ 0 & 1 & 5 & -2 & -1 & 0 \\ 0 & 0 & 0 & \frac{3}{2} & 1 & \frac{1}{2} \end{array}\right]$

No se puede transformar

③ $\begin{bmatrix} 1 & 7 & 7 \\ -1 & -6 & -4 \\ -1 & -6 & -3 \end{bmatrix}^{-1}$

$\left[\begin{array}{ccc|ccc} 1 & 7 & 7 & 1 & 0 & 0 \\ -1 & -6 & -4 & 0 & 1 & 0 \\ -1 & -6 & -3 & 0 & 0 & 1 \end{array}\right]$

$*-1 \quad *-1$

$\left[\begin{array}{ccc|ccc} 1 & 7 & 7 & 1 & 0 & 0 \\ 1 & 6 & 4 & 0 & -1 & 0 \\ 1 & 6 & 3 & 0 & 0 & -1 \end{array}\right]$

$*-1 f_1 + f_2$

$*-1 f_1 + f_3$

$\left[\begin{array}{ccc|ccc} 1 & 7 & 7 & 1 & 0 & 0 \\ 0 & -1 & -3 & -1 & -1 & 0 \\ 0 & -1 & -4 & -1 & 0 & -1 \end{array}\right]$ $*-1$ $*-1$

$\left[\begin{array}{ccc|ccc} 1 & 7 & 7 & 1 & 0 & 0 \\ 0 & 1 & 3 & 1 & 1 & 0 \\ 0 & 1 & 4 & 1 & 0 & 1 \end{array}\right]$

$*-7 f_2 + f_1$

$*-1 f_2 + f_3$

$\left[\begin{array}{ccc|ccc} 1 & 0 & -14 & -6 & -7 & 0 \\ 0 & 1 & 3 & 1 & 1 & 0 \\ 0 & 0 & 1 & 0 & -1 & 1 \end{array}\right]$

$*14 f_3 + f_1$

$*-3 f_3 + f_2$

$\left[\begin{array}{ccc|ccc} 1 & 0 & 0 & -6 & -21 & 14 \\ 0 & 1 & 0 & 1 & 4 & -3 \\ 0 & 0 & 1 & 0 & -1 & 1 \end{array}\right]$

$\begin{bmatrix} -6 & -21 & 14 \\ 1 & 4 & -3 \\ 0 & -1 & 1 \end{bmatrix}$

0

(4)

$$\begin{bmatrix} 0 & -4 & 5 \\ -1 & 1 & -3 \\ -1 & 0 & -2 \end{bmatrix}^{-1}$$

$$\left[\begin{array}{ccc|ccc} 0 & -4 & 5 & 1 & 0 & 0 \\ -1 & 1 & -3 & 0 & 1 & 0 \\ -1 & 0 & -2 & 0 & 0 & 1 \end{array}\right]$$

$*-1\ F3$

$$\left[\begin{array}{ccc|ccc} 0 & -4 & 5 & 1 & 0 & 0 \\ -1 & 1 & -3 & 0 & 1 & 0 \\ 1 & 0 & 2 & 0 & 0 & -1 \end{array}\right]$$

$F3 + F2$

$$\left[\begin{array}{ccc|ccc} 0 & -4 & 5 & 1 & 0 & 0 \\ 0 & 1 & -1 & 0 & 1 & -1 \\ 1 & 0 & 2 & 0 & 0 & -1 \end{array}\right]$$

$*-4\ F2 + F1$

$$\left[\begin{array}{ccc|ccc} 0 & 0 & 1 & 1 & 4 & -4 \\ 0 & 1 & -1 & 0 & 1 & -1 \\ 1 & 0 & 2 & 0 & 0 & -1 \end{array}\right]$$

$F1 + F2$

$*-2\ F1 + F3$

$$\left[\begin{array}{ccc|ccc} 0 & 0 & 1 & 1 & 4 & -4 \\ 0 & 1 & 0 & 1 & 5 & -5 \\ 1 & 0 & 0 & -2 & -8 & 7 \end{array}\right]$$

Reordenar

$$\left[\begin{array}{ccc|ccc} 1 & 0 & 0 & -2 & -8 & 7 \\ 0 & 1 & 0 & 1 & 5 & -5 \\ 0 & 0 & 1 & 1 & 4 & -4 \end{array}\right]$$

(5)

$$\begin{bmatrix} -3 & -2 \\ 8 & 5 \end{bmatrix}^{-1}$$

$$\begin{vmatrix} -3 & -2 \\ 8 & 5 \end{vmatrix}$$

Determinante

$-15 - (-16) = 1$

$$\frac{1}{-3 \times 5 - (-2) \times 8} \times \begin{vmatrix} 5 & -(-2) \\ -8 & -3 \end{vmatrix}$$

$$\frac{1}{-15 + 16} \times \begin{bmatrix} 5 & 2 \\ -8 & -3 \end{bmatrix}$$

$$1 \begin{bmatrix} 5 & 2 \\ -8 & -3 \end{bmatrix}$$

$$\begin{bmatrix} 5 & 2 \\ -8 & -3 \end{bmatrix}$$

5^{-1}

$\frac{1}{5}$

⑥

$$\begin{bmatrix} -4 & 6 & 1 \\ -2 & 1 & -2 \\ -3 & 3 & -1 \end{bmatrix}^{-1}$$

$$\left[\begin{array}{ccc|ccc} -4 & 6 & 1 & 1 & 0 & 0 \\ -2 & 1 & -2 & 0 & 1 & 0 \\ -3 & 3 & -1 & 0 & 0 & 1 \end{array}\right]$$

$*-2\,f_1 + f_2$

$-\quad f_1 + f_3$

$$\left[\begin{array}{ccc|ccc} -4 & 6 & 1 & 1 & 0 & 0 \\ -10 & 13 & 0 & 2 & 1 & 0 \\ -7 & 9 & 0 & 1 & 0 & 1 \end{array}\right]$$

$*-4/7\,f_3 + f_1$

$*-10/7\,f_3 + f_2$

$$\left[\begin{array}{ccc|ccc} 0 & 6/7 & 1 & 3/7 & 0 & -4/7 \\ 0 & 1/7 & 0 & 4/7 & 1 & -10/7 \\ -7 & 9 & 0 & 1 & 0 & 1 \end{array}\right]$$

$*-7\,f_2$

$$\left[\begin{array}{ccc|ccc} 0 & 6/7 & 1 & 3/7 & 0 & -4/7 \\ 0 & 1 & 0 & 4 & 7 & -10 \\ -7 & 9 & 0 & 1 & 0 & 1 \end{array}\right]$$

$*-6/7\,f_2 + f_1$

$*-9\,f_2 + f_3$

$$\left[\begin{array}{ccc|ccc} 0 & 0 & 1 & -3 & -6 & 8 \\ 0 & 1 & 0 & 4 & 7 & -10 \\ -7 & 0 & 0 & -35 & -63 & 91 \end{array}\right]$$

$/7\,f_3$

$$\left[\begin{array}{ccc|ccc} 0 & 0 & 1 & -3 & -6 & 8 \\ 0 & 1 & 0 & 4 & 7 & -10 \\ 1 & 0 & 0 & 5 & 9 & -13 \end{array}\right]$$

⑦

$$\begin{bmatrix} -3 & 5 & 2 \\ -1 & 0 & 3 \\ -4 & 8 & 1 \end{bmatrix}^{-1}$$

$$\left[\begin{array}{ccc|ccc} -3 & 5 & 2 & 1 & 0 & 0 \\ -1 & 0 & 3 & 0 & 1 & 0 \\ -4 & 8 & 1 & 0 & 0 & 1 \end{array}\right]$$

$*-2\,f_3 + f_1$

$*-3\,f_3 + f_2$

$$\left[\begin{array}{ccc|ccc} 5 & -11 & 0 & 1 & 0 & -2 \\ 11 & -24 & 0 & 0 & 1 & -3 \\ -4 & 8 & 1 & 0 & 0 & 1 \end{array}\right]$$

$*-11/5\,f_1 + f_2$

$*\,4/5\,f_1 + f_3$

$$\left[\begin{array}{ccc|ccc} 5 & -11 & 0 & 1 & 0 & -2 \\ 0 & 1/5 & 0 & -11/5 & 1 & 7/5 \\ 0 & -4/5 & 1 & 4/5 & 0 & -3/5 \end{array}\right]$$

$*5\,f_2$

$$\left[\begin{array}{ccc|ccc} 5 & -11 & 0 & 1 & 0 & -2 \\ 0 & 1 & 0 & -11 & 5 & 7 \\ 0 & -4/5 & 1 & 4/5 & 0 & -3/5 \end{array}\right]$$

$*1\,|\,f_2 + f_1$

$*\,4/5\,f_2 + f_3$

$$\left[\begin{array}{ccc|ccc} 5 & 0 & 0 & -120 & 55 & 75 \\ 0 & 1 & 0 & -11 & 5 & 7 \\ 0 & 0 & 1 & -8 & 4 & 5 \end{array}\right]$$

$f_1/5$

$$\left[\begin{array}{ccc|ccc} 1 & 0 & 0 & -24 & 11 & 15 \\ 0 & 1 & 0 & -11 & 5 & 7 \\ 0 & 0 & 1 & -8 & 4 & 5 \end{array}\right]$$

$$\left[\begin{array}{ccc|ccc} 1 & 0 & 0 & 5 & 9 & -13 \\ 0 & 1 & 0 & 4 & 7 & -10 \\ 0 & 0 & 1 & -3 & -6 & 8 \end{array}\right]$$

(8)

$$\begin{bmatrix} 1 & 0 & 2 \\ 2 & -1 & 3 \\ 4 & 1 & 8 \end{bmatrix}^{-1}$$

$$\left[\begin{array}{ccc|ccc} 1 & 0 & 2 & 1 & 0 & 0 \\ 2 & -1 & 3 & 0 & 1 & 0 \\ 4 & 1 & 8 & 0 & 0 & 1 \end{array}\right]$$

$*-2f_1 + f_2$

$*-4f_1 + f_3$

$$\left[\begin{array}{ccc|ccc} 1 & 0 & 2 & 1 & 0 & 0 \\ 0 & -1 & -1 & -2 & 1 & 0 \\ 0 & 1 & 0 & -4 & 0 & 1 \end{array}\right]$$

$*-1f_2$

$$\left[\begin{array}{ccc|ccc} 1 & 0 & 2 & 1 & 0 & 0 \\ 0 & 1 & 1 & 2 & -1 & 0 \\ 0 & 1 & 0 & -4 & 0 & 1 \end{array}\right]$$

$f_3 * -1 + f_2$

$$\left[\begin{array}{ccc|ccc} 1 & 0 & 2 & 1 & 0 & 0 \\ 0 & 0 & 1 & 6 & -1 & -1 \\ 0 & 1 & 0 & -4 & 0 & 1 \end{array}\right]$$

$*-2f_2 + f_1$

$$\left[\begin{array}{ccc|ccc} 1 & 0 & 0 & -11 & 2 & 2 \\ 0 & 0 & 1 & 6 & -1 & -1 \\ 0 & 1 & 0 & -4 & 0 & 0 \end{array}\right]$$

Reordenar

$$\left[\begin{array}{ccc|ccc} 1 & 0 & 0 & -11 & 2 & 2 \\ 0 & 1 & 0 & -4 & 0 & 1 \\ 0 & 0 & 1 & 6 & -1 & -1 \end{array}\right]$$

(9)

$$\begin{bmatrix} -3 & 19 & 36 \\ -4 & 27 & 51 \\ 0 & -1 & -2 \end{bmatrix}^{-1}$$

$$\left[\begin{array}{ccc|ccc} -3 & 19 & 36 & 1 & 0 & 0 \\ -4 & 27 & 51 & 0 & 1 & 0 \\ 0 & -1 & -2 & 0 & 0 & 1 \end{array}\right]$$

$f_3 * -1$

$$\left[\begin{array}{ccc|ccc} -3 & 19 & 36 & 1 & 0 & 0 \\ -4 & 27 & 51 & 0 & 1 & 0 \\ 0 & 1 & 2 & 0 & 0 & -1 \end{array}\right]$$

$*-19f_3 + f_1$

$*-27f_3 + f_2$

$$\left[\begin{array}{ccc|ccc} -3 & 0 & -2 & 1 & 0 & 19 \\ -4 & 0 & -3 & 0 & 1 & 27 \\ 0 & 1 & 2 & 0 & 0 & -1 \end{array}\right]$$

$f_1 * -1 \qquad -f_3 * -1$

$$\left[\begin{array}{ccc|ccc} 3 & 0 & 2 & -1 & 0 & -19 \\ 4 & 0 & 3 & 0 & -1 & -27 \\ 0 & 1 & 2 & 0 & 0 & -1 \end{array}\right]$$

$*-3/2f_1 + f_2 \qquad *-1f_1 + f_3$

$$\left[\begin{array}{ccc|ccc} 3 & 0 & 2 & -1 & 0 & -19 \\ -1/2 & 0 & 0 & 3/2 & -1 & 3/2 \\ -3 & 1 & 0 & 1 & 0 & 18 \end{array}\right]$$

$f_2 * -2$

$$\left[\begin{array}{ccc|ccc} 3 & 0 & 2 & -1 & 0 & -19 \\ 1 & 0 & 0 & -3 & 2 & -3 \\ -3 & 1 & 0 & 1 & 0 & 18 \end{array}\right]$$

$*-3f_2 + f_1 \qquad *3f_2 + f_3$

$$\left[\begin{array}{ccc|ccc} 0 & 0 & 2 & 8 & -6 & -10 \\ 1 & 0 & 0 & -3 & 2 & -3 \\ 0 & 1 & 0 & -8 & 6 & 9 \end{array}\right]$$

$f_1/2$

Continuacion (9)↓

$$\left(\begin{array}{ccc|ccc} 0 & 0 & 1 & 4 & -3 & -5 \\ 1 & 0 & 0 & -3 & 2 & -3 \\ 0 & 1 & 0 & -8 & 6 & 9 \end{array}\right)$$

Reordenar

$$\left(\begin{array}{ccc|ccc} 1 & 0 & 0 & -3 & 2 & -3 \\ 0 & 1 & 0 & -8 & 6 & 9 \\ 0 & 0 & 1 & 4 & -3 & -5 \end{array}\right)$$

$$\left(\begin{array}{ccc|ccc} 0 & 0 & 1 & -1 & 2 & 0 \\ 1 & 0 & 0 & 45 & -85 & -4 \\ 0 & 1 & 0 & 10 & -19 & -1 \end{array}\right)$$

Reordenar

$$\left(\begin{array}{ccc|ccc} 1 & 0 & 0 & 45 & -85 & -4 \\ 0 & 1 & 0 & 10 & -19 & -1 \\ 0 & 0 & 1 & -1 & 2 & 0 \end{array}\right)$$

(10)

$$\begin{bmatrix} 2 & -8 & 9 \\ 1 & -4 & 5 \\ 1 & -5 & -5 \end{bmatrix}^{-1}$$

$$\left(\begin{array}{ccc|ccc} -2 & -8 & 9 & 1 & 0 & 0 \\ 1 & -4 & 5 & 0 & 1 & 0 \\ 1 & -5 & -5 & 0 & 0 & 1 \end{array}\right)$$

$*-2f_2 + F_1$

$*-1f_2 + f_3$

$$\left(\begin{array}{ccc|ccc} 0 & 0 & -1 & 1 & -2 & 0 \\ 1 & -4 & 5 & 0 & 1 & 0 \\ 0 & -1 & -10 & 0 & -1 & 1 \end{array}\right)$$

$*-1F_1$ $*-1F_3$

$$\left(\begin{array}{ccc|ccc} 0 & 0 & 1 & -1 & 2 & 0 \\ 1 & -4 & 5 & 0 & 1 & 0 \\ 0 & 1 & 10 & 0 & 1 & -1 \end{array}\right)$$

$*-5F_1 + F_2$ $*-10F_1+f_3$

$$\left(\begin{array}{ccc|ccc} 0 & 0 & 1 & -1 & 2 & 0 \\ 1 & -9 & 0 & 5 & -9 & 0 \\ 0 & 1 & 0 & 10 & -19 & -1 \end{array}\right)$$

$*4F_3 + F_2$

Determinantes

① $\begin{bmatrix} 2 & 7 & 3 \\ 1 & 1 & 8 \\ 9 & 3 & 1 \end{bmatrix}$

$\begin{vmatrix} 2 & 7 & 3 \\ 1 & 1 & 8 \\ 9 & 3 & 1 \end{vmatrix} \begin{matrix} 2 & 7 \\ 1 & 1 \\ 9 & 3 \end{matrix}$

$2+504+9-(27+48+7)$

$2+504+9-82$

433

② $\begin{vmatrix} 1 & -8 & 5 & -4 \\ 0 & -5 & -7 & -6 \\ 0 & 0 & -3 & 8 \\ 0 & 0 & 0 & 2 \end{vmatrix}$

$1\begin{vmatrix} -5 & -7 & -6 \\ 0 & -3 & 8 \\ 0 & 0 & 2 \end{vmatrix} - 0\begin{vmatrix} -8 & 5 & -4 \\ 0 & -3 & 8 \\ 0 & 0 & 2 \end{vmatrix} +$

$0\begin{vmatrix} -8 & 5 & -4 \\ -5 & -7 & -6 \\ 0 & 0 & 2 \end{vmatrix} - 0\begin{vmatrix} -8 & 5 & -4 \\ -5 & -7 & -6 \\ 0 & -3 & 8 \end{vmatrix}$

$0\begin{vmatrix} -7 & -6 \\ -3 & 8 \end{vmatrix} - 0\begin{vmatrix} -5 & -6 \\ 0 & 8 \end{vmatrix} + 2\begin{vmatrix} -5 & -7 \\ 0 & -3 \end{vmatrix}$

$0-0+2\times 15 = 30$

$30+0+0+0 = 30$

④ $\begin{bmatrix} 4 & 1 \\ 2 & 5 \end{bmatrix}$

$20-2$

18

③ $\begin{vmatrix} -5 & 2 & -1 \\ 4 & 1 & 1 \\ 6 & 9 & 2 \end{vmatrix} \begin{matrix} -5 & 2 \\ 4 & 1 \\ 6 & 9 \end{matrix}$

$-10+12-36-(-6-45+16)$

$10+12-36+35$

1

④ $\begin{bmatrix} -1 & 2 & -4 \\ -5 & 5 & -1 \\ -4 & 3 & 2 \end{bmatrix}$

$\begin{vmatrix} -1 & 2 & -4 \\ -5 & 5 & -1 \\ -4 & 3 & 2 \end{vmatrix} \begin{matrix} -1 & 2 \\ -5 & 5 \\ -4 & 3 \end{matrix}$

$-10+8+60-(80+3-20)$

$-10+8+60-63$

-5

⑥

$$\begin{bmatrix} -8 & -5 & 5 \\ 7 & -1 & 1 \\ -11 & 3 & -3 \end{bmatrix}$$

$$\begin{array}{ccc|cc} -8 & -5 & 5 & -8 & -5 \\ 7 & -1 & 1 & 7 & -1 \\ -11 & 3 & -3 & -11 & 3 \end{array}$$

$-24+55+105-(55-24+105$

$-24+55+105-136$

0 ~~$\neq$~~

Un mercado quiere ofrecer 3 clases de charolas de queso A, B, C, la charola A contiene 40 grs de queso manchego, 160 grs roquefort y 80 grs de cheddar
B = 120 gr c/u de la charola A
C = 150 grs de manchego, 80 gr roquefort y 80 grs de cheddar
Si quieren sacar al mercado 50 A, 80 B, 100 C

$$\begin{matrix} A & B & C \\ \begin{bmatrix} 40 & 120 & 150 \\ 160 & 120 & 80 \\ 80 & 120 & 80 \end{bmatrix} & \cdot & \begin{bmatrix} 50 \\ 80 \\ 100 \end{bmatrix} \end{matrix}$$

$40 \times 50 + 120 \times 80 + 150 \times 100 = 28\,600$ kg $= 26.6$
$160 \times 50 + 120 \times 80 + 80 \times 100 = 25\,600 = 25.6$
$80 \times 50 + 120 \times 80 + 80 \times 100 = 21\,600 = 21.6$

3 estudiante las siguiente cantidad de fruta

A =	2 kg Pera	4 manzana	6 de naranja
B =	2 pera	2 manzana	4 de naranja
C =	1 pera	2 manzana	3 de naranja

F_1 = 4 kpera = 12.5 € 1 manzana = 0.1 € 1 naranja = 2 €
F_2 " = 1.8 € " = 0.8 € " 2 €

Expresa matricialmente la cantidad de fruta
Escribe una matriz con precios
Obten una matriz a partir de las anteriores

Frutas

$$\begin{matrix} & P & H & N \\ \end{matrix}\begin{bmatrix} 2 & 1 & 6 \\ 2 & 2 & 4 \\ 1 & 2 & 3 \end{bmatrix} \cdot \begin{matrix} P \\ H \\ N \end{matrix}\begin{bmatrix} 1.5 & 1.8 \\ 1 & 0.8 \\ 2 & 2 \end{bmatrix}$$

$2\times1.5+1\times1+6\times2 \quad 2\times1.8+1\times0.8+6\times2$

$2\times1.5+2\times1+4\times2 \quad 2\times1.8+2\times0.8+4\times2$

$1\times1.5+2\times1+3\times2 \quad 1\times1.8+2\times0.8+3\times2$

$$\begin{bmatrix} 16 & 16.4 \\ 13 & 13.2 \\ 9.5 & 9.4 \end{bmatrix}$$

Hoteles

$$\begin{matrix} A \\ B \\ C \end{matrix}\begin{bmatrix} 2 & 1 \\ 3 & 1 \\ 1 & 2 \end{bmatrix} \cdot \begin{matrix} \begin{bmatrix} 84 & 86 & 85 \\ 45 & 43 & 44 \end{bmatrix} \end{matrix} \begin{matrix} D \\ S \end{matrix}$$

$2\times84+1\times45 \quad 2\times86+1\times43 \quad 2\times85+1\times44$

$3\times84+1\times45 \quad 3\times86+1\times43 \quad 3\times85+1\times44$

$1\times84+2\times45 \quad 1\times86+2\times43 \quad 1\times85+2\times44$

$$\begin{matrix} A \\ B \\ C \end{matrix}\begin{bmatrix} 213 & 215 & 214 \\ 297 & 301 & 299 \\ 174 & 172 & 173 \end{bmatrix}$$

MD

22-10-24

Pastelería 3 tipos de postres A, B, C utilizan leche, huevos azucar etc sus cantidades son:

A = 3/4 litro de leche, 100g Azucar, 4 huevos
B = 3/4 " " , 112g " , 7 huevos
C = 1 litro de leche, 200g " , 0 huevos

	Ingredientes		
Precio	leche	Azucar	Huevos
	0.6€	1€	1,2€
	1 litro	1kg	Docena

Obten matricialmente el gasto que supone cada uno de estos tres postres (teniendo en cuenta solamente los ingr indicados)

$$\begin{pmatrix} 0.75 & 100 & 4 \\ 0.75 & 112 & 7 \\ 1 & 200 & 0 \end{pmatrix} \text{Convertir} \begin{pmatrix} 0,75 & 0,1 & 4/12 \\ 0,75 & 0,112 & 7/12 \\ 1 & 0,2 & 9/12 \end{pmatrix}$$

$$\frac{4 \div 4}{12 \div 4} = \frac{1}{3}$$

$$\begin{pmatrix} 0,75 & 0,1 & 1/3 \\ 0,75 & 0,112 & 7/12 \\ 1 & 0,2 & 0/12 \end{pmatrix} \cdot \begin{pmatrix} 0,6 \\ 1 \\ 1,2 \end{pmatrix}$$

$(0,75 \times 0,6) + (0,1 \times 1) + (1/3 \times 1,2) = 0,95$
$(0,75 \times 0,6) + (0,112 \times 1) + 7/12 \times 1,2) = 1,262$
$(1 \times 0,6) + (0,2 \times 1) + (0 \times 1,2) = 0,8$

$$\begin{pmatrix} 0,95 \\ 1,262 \\ 0,8 \end{pmatrix}$$