

Validacion- Matemáticas-

[REDACTED]

En la siguiente hoja:

EDA. Validación

1) Don lo minimo expresion

$$\frac{x^3 + 27}{(x+7)(x^2-3x+9)} : \frac{-2x^2-6x}{x^2-49} \Rightarrow \frac{x^3+27}{(x+7)(x^2-3x+9)} \cdot \frac{x^2-49}{-2x^2-6x}$$

$$\frac{(x+3)(x^2-3x+9)}{(x+7)(x^2-3x+9)} \cdot \frac{(x-7)(x+7)}{-2x(x+3)}$$

$$\frac{x-7}{-2x}$$

C.A

$$x^3 + 27 = 0$$

$$x^3 = -27$$

$$x = -3$$

$$\begin{array}{r|l} 1 & 0 & 0 & 27 \\ -3 & 9 & -27 & \\ \hline & 1 & -3 & 9 & 0 \end{array}$$

$$(x^2-3x+9)$$

$$x^2-3x+9$$

2) $(\log_s x)^2 - \log_s x^2 - 8 = 0$

$$(\log_s x)^2 - 2 \log_s x - 8 = 0 \quad \text{Si } \log_s x = t$$

$$t^2 - 2t - 8 = 0$$

$$t_2 = 4 \quad t_1 = -2$$

C.A

$$\frac{2 \pm \sqrt{4 - 4 \cdot 1 \cdot (-8)}}{2}$$

$$\frac{2 \pm \sqrt{36}}{2} = \frac{2 \pm 6}{2} \quad t_1 = -2 \quad t_2 = 4$$

$$\log_s x = 4$$

$$x = s^4$$

$$x = 625$$

$$\log_s x = -2$$

$$x = s^{-2}$$

$$x = \frac{1}{25}$$

Verific.

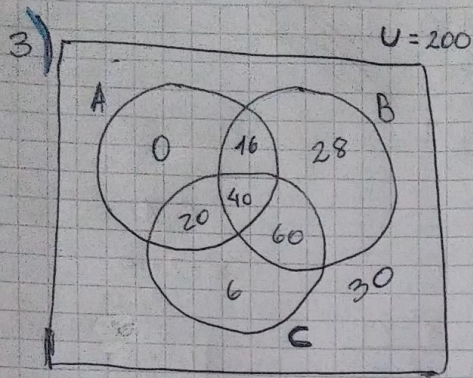
$$(\log_{25} 625)^2 - \log_{25} 625^2 - 8 = 0$$

$$4^2 - 2 \cdot \log_{25} 625 - 8 = 0$$

$$4^2 - 2 \cdot 4 - 8 = 0$$

$$16 - 8 - 8 = 0$$

$$0 = 0$$



1) → 40

2) → 20

3) → 30

4) → 6

5) → 60

6) → 28

7) → 16

a) Solo consumen B unos 28 personas

b) Consumen A y B unos 56 personas $16 + 40 = 56$

c) Consumen solo A unos 0 personas

4) $\vec{x} = (-9, 7, 2)$ ¿es C.L? de $\vec{u} = (1, -1, 0)$

$\vec{v} = (-2, 3, -1)$

$\vec{w} = (2, 1, -3)$

$$(-9, 7, 2) = a \cdot (1, -1, 0) + b \cdot (-2, 3, -1) + c \cdot (2, 1, -3)$$

$$(-9, 7, 2) = (a - 2b + 2c, -a + 3b + c, -b - 3c)$$

$$\begin{cases} -9 = a - 2b + 2c \\ 7 = -a + 3b + c \\ 2 = -b - 3c \end{cases}$$

$$\left(\begin{array}{ccc|c} 1 & -2 & 2 & -9 \\ -1 & 3 & 1 & 7 \\ 0 & -1 & -3 & 2 \end{array} \right)$$

$$F_2 + F_1 \left(\begin{array}{ccc|c} 1 & -2 & 2 & -9 \\ 0 & 1 & 3 & -2 \\ 0 & -1 & -3 & 2 \end{array} \right)$$

$$F_3 + F_2 \left(\begin{array}{ccc|c} 1 & -2 & 2 & -9 \\ 0 & 1 & 3 & -2 \\ 0 & 0 & 0 & 0 \end{array} \right)$$

No es combinación lineal es incompatible

porque no es igual

F.R.M.