



# Mi Universidad

## ACTIVIDAD PARCIAL 2

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**TEMA: TEOREMA DE BAYES**

**MATERIA: BIOESTADISTICA**

**NOMBRE DEL PROFESOR: MAGNER JOEL HERRERA  
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**CUATRIMESTRE: 4°**

*FRONTERA COMALAPA CHIAPAS A 14 DE OCTUBRE DEL 2023*

## Ejercicio 1

$$X = 50\% - 0.5 \quad C \quad 3\% - 0.03$$

$$Y = 30\% - 0.3 \quad C \quad 4\% - 0.04$$

$$Z = 20\% - 0.2 \quad C \quad 5\% - 0.05$$

$$\begin{aligned} a) &= (0.5) (0.03) + (0.3) (0.04) + (0.2) (0.05) \\ &= 0.015 + 0.012 + 0.01 \\ &= 0.037 = 3.7\% \end{aligned}$$

b)

$$X = \frac{0.015}{0.037} = 0.4054 = 40.45\%$$

$$Y = \frac{0.012}{0.037} = 0.3243 = 32.43\%$$

$$Z = \frac{0.01}{0.037} = 0.2702 = 27.02\%$$

## Ejercicio 2

$$A = 40\% - 0.4 \quad D \quad 80\% - 0.8$$

$$B = 25\% - 0.25 \quad D \quad 90\% - 0.9$$

$$Z = 35\% - 0.35 \quad D \quad 95\% - 0.95$$

$$\begin{aligned} \text{a)} & (0.4)(0.8) + (0.25)(0.9) + (0.35)(0.95) \\ & = 0.32 + 0.225 + 0.3325 \\ & = 0.8775 = 87.75\% \end{aligned}$$

$$\text{A)} \quad \frac{0.32}{0.8775} = 0.3646 = 36.46\%$$

$$\text{B)} \quad \frac{0.225}{0.8775} = 0.2564 = 25.64\%$$

$$\text{C)} \quad \frac{0.3325}{0.8775} = 0.3789 = 37.89\%$$

### Ejercicio 3

$$LB A = 45\% - 0.45 \quad C 3\% - 0.03$$

$$LB B = 30\% - 0.3 \quad C 4\% - 0.04$$

$$LB C = 25\% - 0.25 \quad C 5\% - 0.5$$

$$\begin{aligned} a) &= (0.45) (0.03) + (0.3) (0.04) + (0.25) (0.5) \\ &= 0.0135 + 0.012 + 0.0125 \\ &= 0.038 = 3.8\% \end{aligned}$$

$$b) = LAB B \frac{0.012}{0.038} = 0.3157 = 31.57\%$$

$$c) = LAB A = \frac{0.0135}{0.038} = 0.3552 = 35.52\%$$

$$LAB B \frac{0.012}{0.038} = 0.3157 = 31.57\%$$

$$LAB C \frac{0.0125}{0.038} = 0.03289 = 32.89\%$$