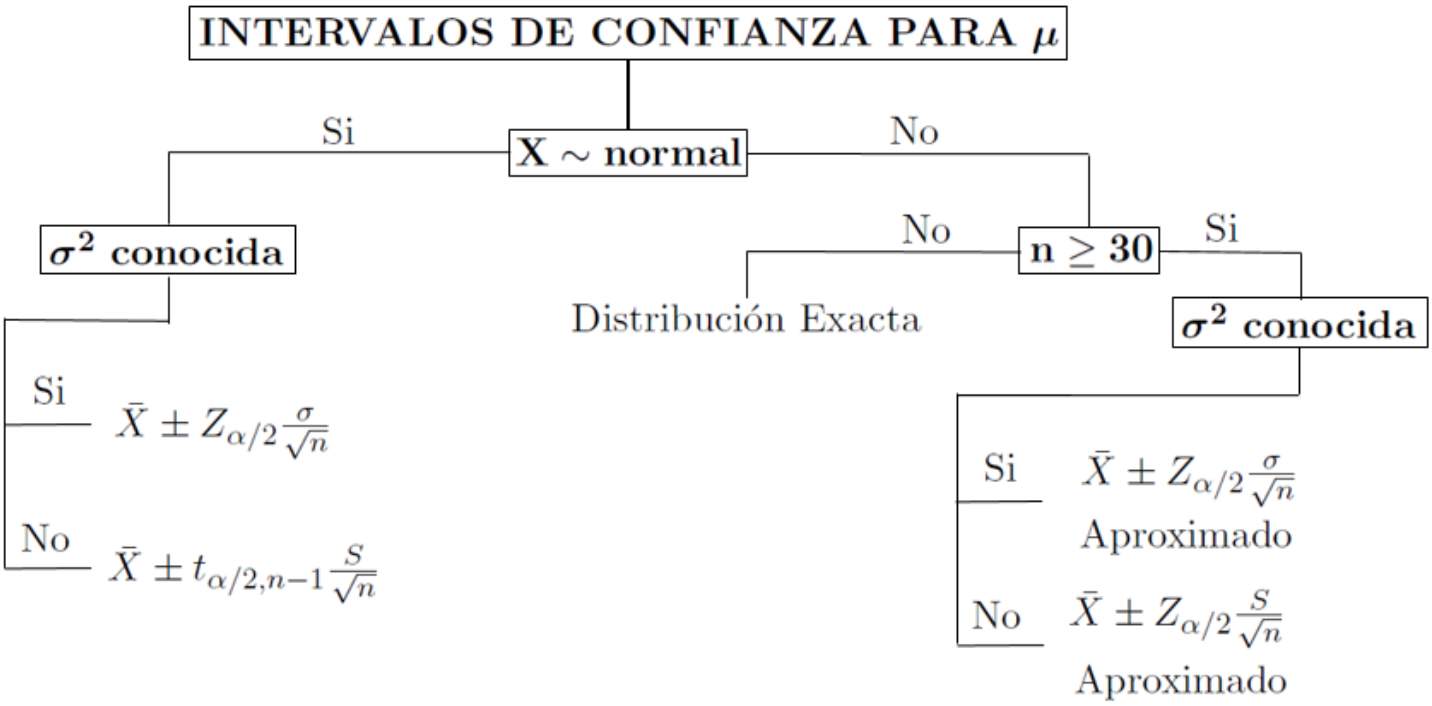
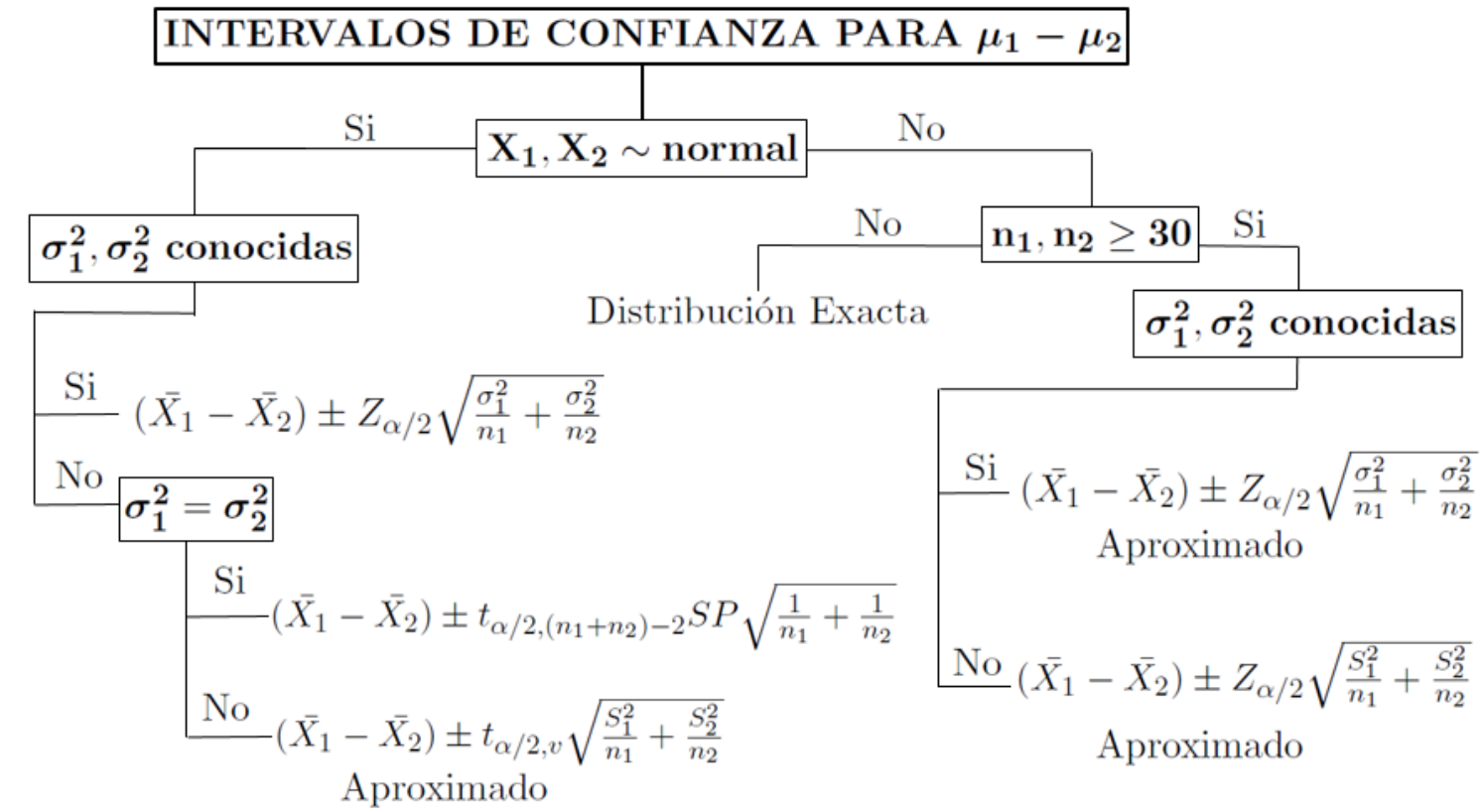
UNIVERSIDAD NACIONAL DE COLOMBIA
SEDE MEDELLÍN
FACULTAD DE CIENCIAS
ESCUELA DE ESTADÍSTICA





$$SP = \sqrt{\frac{(n_1-1)S_1^2+(n_2-1)S_2^2}{n_1+n_2-2}} \qquad v = \frac{\left(\frac{S_1^2}{n_1}+\frac{S_2^2}{n_2}\right)^2}{\frac{\left(\frac{S_1^2}{n_1}\right)^2}{n_1-1}+\frac{\left(\frac{S_2^2}{n_2}\right)^2}{n_2-1}}$$

INTERVALOS DE CONFIANZA PARA P

$$\text{Si} \quad \begin{matrix}\mathbf{X \sim bin(n, P)} \\ \mathbf{n \geq 30}\end{matrix} \quad \Longrightarrow \quad \begin{matrix}\hat{P} \pm Z_{\alpha/2}\sqrt{\frac{\hat{P}(1-\hat{P})}{n}} \\ \text{Aproximado}\end{matrix}$$

INTERVALOS DE CONFIANZA PARA $\mathbf{P_1 - P_2}$

$$\text{Si} \quad \begin{matrix}\mathbf{X_1 \sim bin(n_1, P_1), X_2 \sim bin(n_2, P_2)} \\ \mathbf{n_1, n_2 \geq 30}\end{matrix} \quad \Longrightarrow \quad \begin{matrix}\hat{P}_1 - \hat{P}_2 \pm Z_{\alpha/2}\sqrt{\frac{\hat{P}_1(1-\hat{P}_1)}{n_1}+\frac{\hat{P}_2(1-\hat{P}_2)}{n_2}} \\ \text{Aproximado}\end{matrix}$$

NOTAS:

- Si no se tiene $\hat{P}$, se asume igual a 0.5.
- $\prod_{i=1}^{n} a = a^n.$
- $\prod_{i=1}^{n} exp\left\{-\frac{x_i}{a}\right\} = exp\left\{-\frac{1}{a}\sum_{i=1}^{n} x_i\right\}.$
- $ln\left[\prod_{i=1}^{n}(x_i)\right] = \sum_{i=1}^{n} ln(x_i).$