

Parámetro	Supuesto	Estimador	Distribución del estimador	Intervalo de confianza
$\mu$	$\sigma$ conocido	$\bar{x}$	$\bar{x} \sim N\left(\mu, \frac{\sigma}{\sqrt{n}}\right)$	$\left(\bar{x} \pm  Z_{\left(1-\frac{\alpha}{2}\right)}  \frac{\sigma}{\sqrt{n}}\right)$
$\mu$	$\sigma$ desconocido, $n > 30$	$\bar{x}$	$\bar{x} \sim N\left(\mu, \frac{S}{\sqrt{n}}\right)$	$\left(\bar{x} \pm  Z_{\left(1-\frac{\alpha}{2}\right)}  \frac{S}{\sqrt{n}}\right)$
$\mu$	$\sigma$ desconocido, $n < 30$	$\bar{x}$	$\frac{\bar{x} - \mu}{\frac{S'}{\sqrt{n}}} = t_{(n-1)}$	$\left(\bar{x} \pm  t_{\left(1-\frac{\alpha}{2}; n-1\right)}  \frac{S'}{\sqrt{n}}\right)$
$\sigma^2$	Población normal	$S^2$	$\frac{n.S^2}{\sigma^2} = \chi^2_{(n-1)} \quad \text{ó} \quad \frac{(n-1).S^2}{\sigma^2} = \chi^2_{(n-1)}$	$\left(\frac{n.S^2}{\chi^2_{\left(1-\frac{\alpha}{2}; n-1\right)}} \leq \sigma^2 \leq \frac{n.S^2}{\chi^2_{\left(\frac{\alpha}{2}; n-1\right)}}\right)$
$\pi$	Población normal	p	$Z = \frac{p - \pi}{\sqrt{\frac{\pi(1-\pi)}{n}}}$	$\left(p \pm  Z_{\left(1-\frac{\alpha}{2}\right)}  \sqrt{\frac{\pi(1-\pi)}{n}}\right)$
$\mu_x - \mu_y$	$\sigma_x, \sigma_y$ conocidas	$\bar{x} - \bar{y}$	$\bar{x} - \bar{y} \sim N\left(\mu_x - \mu_y, \sqrt{\frac{\sigma_x^2}{n_x} + \frac{\sigma_y^2}{n_y}}\right)$	$\left((\bar{x} - \bar{y}) \pm  Z_{\left(1-\frac{\alpha}{2}\right)}  \sqrt{\frac{\sigma_x^2}{n_x} + \frac{\sigma_y^2}{n_y}}\right)$
$\mu_x - \mu_y$	$\sigma_x, \sigma_y$ desconocidas $n > 30$	$\bar{x} - \bar{y}$	$\bar{x} - \bar{y} \sim N\left(\mu_x - \mu_y, \sqrt{\frac{S_x^2}{n_x} + \frac{S_y^2}{n_y}}\right)$	$\left((\bar{x} - \bar{y}) \pm  Z_{\left(1-\frac{\alpha}{2}\right)}  \sqrt{\frac{S_x^2}{n_x} + \frac{S_y^2}{n_y}}\right)$

$\mu_x - \mu_y$	$\sigma_x, \sigma_y$ desconocidas pero iguales $n < 30$	$\bar{x} - \bar{y}$	$\frac{\bar{x} - \bar{y} - (\mu_x - \mu_y)}{Sw \cdot \sqrt{\frac{1}{n_x} + \frac{1}{n_y}}} = t_{(n_x + n_y - 2)}$ $\text{con } Sw = \sqrt{\frac{(n_x - 1) \cdot S_x'^2 + (n_y - 1) \cdot S_y'^2}{n_x + n_y - 2}}$ $\text{ó con } Sw = \sqrt{\frac{n_x \cdot S_x^2 + n_y \cdot S_y^2}{n_x + n_y - 2}}$	$\left( (\bar{x} - \bar{y}) \pm  t_{\left(1-\frac{\alpha}{2}\right)}  \cdot Sw \cdot \sqrt{\frac{1}{n_x} + \frac{1}{n_y}} \right)$
$\mu_x - \mu_y$	$\sigma_x, \sigma_y$ desconocidas y distintas $n < 30$	$\bar{x} - \bar{y}$	$\frac{\bar{x} - \bar{y} - (\mu_x - \mu_y)}{\sqrt{\frac{S_x'^2}{n_x} + \frac{S_y'^2}{n_y}}} = t_v$ $\text{con } v = \frac{\left(\frac{S_x'^2}{n_x} + \frac{S_y'^2}{n_y}\right)^2}{\frac{\left(\frac{S_x'^2}{n_x}\right)^2}{n_x + 1} + \frac{\left(\frac{S_y'^2}{n_y}\right)^2}{n_y + 1}} - 2$	$\left( (\bar{x} - \bar{y}) \pm  t_{\left(1-\frac{\alpha}{2}\right), v}  \cdot \sqrt{\frac{S_x^2}{n_x} + \frac{S_y^2}{n_y}} \right)$
$\pi_1 - \pi_2$	Poblaciones normales	$p_1 - p_2$	$p_1 - p_2 \sim N \left( \pi_1 - \pi_2; \sqrt{\frac{\pi_1(1-\pi_1)}{n_1} + \frac{\pi_2(1-\pi_2)}{n_2}} \right)$	$\left( \Delta p \pm  Z_{\left(1-\frac{\alpha}{2}\right)}  \cdot (I) \right)$ $(I) = \sqrt{\frac{\pi_1(1-\pi_1)}{n_1} + \frac{\pi_2(1-\pi_2)}{n_2}}$
$\frac{\sigma_x^2}{\sigma_y^2}$	Poblaciones normales	$\frac{S_x^2}{S_y^2}$	$F = \frac{\frac{S_x^2}{\sigma_x^2}}{\frac{S_y^2}{\sigma_y^2}}$	$\left( \frac{S_x^2}{S_y^2} (I) \leq \frac{\sigma_x^2}{\sigma_y^2} \leq \frac{S_x^2}{S_y^2} (II) \right)$ $(I) = \frac{1}{F_{\left(\frac{\alpha}{2}; n_x - 1; n_y - 1\right)}} \quad (II) = F_{\left(\frac{\alpha}{2}; n_x - 1; n_y - 1\right)}$

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$\alpha$	Población Normal	$a$	$a \sim N \left( \alpha, \sqrt{\sigma^2 \left( \frac{1}{n} + \frac{\bar{x}^2}{\sum_{i=1}^n (x_i - \bar{x})^2} \right)} \right)$	$a \pm  Z_{\left(1-\frac{\alpha}{2}\right)}  \sqrt{\sigma^2 \left( \frac{1}{n} + \frac{\bar{x}^2}{\sum_{i=1}^n (x_i - \bar{x})^2} \right)}$
$\beta$	Población Normal	$b$	$b \sim N \left( \beta, \sqrt{\frac{\sigma^2}{\sum_{i=1}^n (x_i - \bar{x})^2}} \right)$	$b \pm  Z_{\left(1-\frac{\alpha}{2}\right)}  \sqrt{\frac{\sigma^2}{\sum_{i=1}^n (x_i - \bar{x})^2}}$

Varianza de la Predicción	Varianza del Pronóstico
$\sigma^2(\hat{Y}_h) = \sigma^2 \left( \frac{1}{n} + \frac{(X_h - \bar{X})^2}{\sum_{i=1}^n (X_i - \bar{X})^2} \right)$	$\sigma^2(Y_i - \hat{Y}_h) = \sigma^2 \left( 1 + \frac{1}{n} + \frac{(X_h - \bar{X})^2}{\sum_{i=1}^n (X_i - \bar{X})^2} \right)$