Parámetro y condiciones	Estadísticas	Intervalo de confianza
μ		
1. Población normal 2. Varianza conocida	$Z=\frac{\overline{X}-\mu}{\frac{\sigma}{\sqrt{n}}}$	$\overline{x}-z_{\alpha/2}\frac{\sigma}{\sqrt{n}}\leq\mu\leq\overline{x}+z_{\alpha/2}\frac{\sigma}{\sqrt{n}}$
1. Población no normal 2. Varianza conocida 3. $n\geq 30$	$Z=\frac{\overline{X}-\mu}{\frac{\sigma}{\sqrt{n}}}$	$\overline{x}-z_{\alpha/2}\frac{\sigma}{\sqrt{n}}\leq\mu\leq\overline{x}+z_{\alpha/2}\frac{\sigma}{\sqrt{n}}$
1. Población normal 2. Varianza desconocida	$T=\frac{\overline{X}-\mu}{\frac{s}{\sqrt{n}}}$	$\overline{x}-t_{n-1,\alpha/2}\frac{s}{\sqrt{n}}\leq\mu\leq\overline{x}+t_{n-1,\alpha/2}\frac{s}{\sqrt{n}}$
1. Población no normal 2. Varianza desconocida 3. $n\geq 30$	$Z=\frac{\overline{X}-\mu}{\frac{s}{\sqrt{n}}}$	$\overline{x}-z_{\alpha/2}\frac{s}{\sqrt{n}}\leq\mu\leq\overline{x}+z_{\alpha/2}\frac{s}{\sqrt{n}}$
σ^2 ó σ		
Población normal	$\chi^2=\frac{(n-1)S^2}{\sigma^2}$ $gl=n-1$	$\frac{(n-1)s^2}{\chi^2_{\alpha/2}}\leq\sigma^2\leq\frac{(n-1)s^2}{\chi^2_{1-\alpha/2}}$
p		
	$Z=\frac{\widehat{P}-p}{\sqrt{\frac{pq}{n}}}$ Condiciones: $np\geq 5;\ nq\geq 5$	$\widehat{p}-z_{\alpha/2}\sqrt{\frac{\widehat{p}\widehat{q}}{n}}\leq p\leq\widehat{p}+z_{\alpha/2}\sqrt{\frac{\widehat{p}\widehat{q}}{n}}$ Condiciones: $n\widehat{p}\geq 5;\ n\widehat{q}\geq 5$

Parámetro y condiciones	Condiciones	Intervalo de confianza
$\mu_1-\mu_2$		
1. Poblaciones normales 2. Varianzas conocidas (σ_1^2,σ_2^2) 3.muestras independientes	$Z=\frac{(\overline{X}_1-\overline{X}_2)-(\mu_1-\mu_2)}{\sqrt{\frac{\sigma_1^2}{n_1}+\frac{\sigma_2^2}{n_2}}}$	$(\overline{x}_1-\overline{x}_2)\pm Z_{\alpha/2}\sqrt{\frac{\sigma_1^2}{n_1}+\frac{\sigma_2^2}{n_2}}$
1. Poblaciones no normales 2. Varianzas conocidas (σ_1^2,σ_2^2) 3. $n_1\geq 30$, $n_2\geq 30$ 4. muestras independientes	$Z=\frac{(\overline{X}_1-\overline{X}_2)-(\mu_1-\mu_2)}{\sqrt{\frac{\sigma_1^2}{n_1}+\frac{\sigma_2^2}{n_2}}}$	$(\overline{x}_1-\overline{x}_2)\pm Z_{\alpha/2}\sqrt{\frac{\sigma_1^2}{n_1}+\frac{\sigma_2^2}{n_2}}$
1. Poblaciones normales 2. Varianzas desconocidas pero iguales 3. muestras independientes	$T=\frac{(\overline{X}_1-\overline{X}_2)-(\mu_1-\mu_2)}{\sqrt{s_p^2\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}}$	$(\overline{x}_1-\overline{x}_2)\pm t_{\alpha/2}\sqrt{s_p^2\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}$ $s_p^2=\frac{(n_1-1)s_1^2+(n_2-1)s_2^2}{n_1+n_2-2}$ $gl=n_1+n_2-2.$
1. Poblaciones normales 2. Varianzas desconocidas y diferentes 3. muestras independientes	$T=\frac{(\overline{X}_1-\overline{X}_2)-(\mu_1-\mu_2)}{\sqrt{\frac{s_1^2}{n_1}+\frac{s_2^2}{n_2}}}$	$(\overline{x}_1-\overline{x}_2)\pm t_{\alpha/2}\sqrt{\frac{s_1^2}{n_1}+\frac{s_2^2}{n_2}}$ $v=\frac{\left(\frac{s_1^2}{n_1}+\frac{s_2^2}{n_2}\right)^2}{\frac{\left(\frac{s_1^2}{n_1}\right)^2}{n_1-1}+\frac{\left(\frac{s_2^2}{n_2}\right)^2}{n_2-1}}.$
muestras dependientes	$T=\frac{\overline{D}-\mu_d}{\frac{s_d}{\sqrt{n}}}$	$\overline{d}\pm t_{\alpha/2}\frac{S_d}{\sqrt{n}}$ $gl=n-1$
$\frac{\sigma_1^2}{\sigma_2^2}$ ó $\frac{\sigma_1}{\sigma_2}$		
Poblaciones normales	$F=\frac{\sigma_2^2S_1^2}{\sigma_1^2S_2^2}$	$\frac{s_1^2}{s_2^2}\frac{1}{f_{v_1,v_2,\alpha/2}}\leq\frac{\sigma_1^2}{\sigma_2^2}\leq\frac{s_1^2}{s_2^2}f_{v_2,v_1,\alpha/2}$ $gl\ num=v_1=n_1-1,$ $gl\ den=v_2=n_2-1,$
p_1-p_2	$Z=\frac{(\widehat{P}_1-\widehat{P}_2)-(p_1-p_2)}{\sqrt{\frac{p_1q_1}{n_1}+\frac{p_2q_2}{n_2}}}$	$(\widehat{p}_1-\widehat{p}_2)\pm z_{a/2}\sqrt{\frac{\widehat{p}_1\widehat{q}_1}{n_1}+\frac{\widehat{p}_2\widehat{q}_2}{n_2}}$
$n_1\widehat{p}_1\geq 5,\quad n_1\widehat{q}_1\geq 5$ $n_2\widehat{p}_2\geq 5,\quad n_2\widehat{q}_2\geq 5$	Valor estadística: $z=\frac{(\widehat{p}_1-\widehat{p}_2)-(p_1-p_2)}{\sqrt{\frac{\widehat{p}_1\widehat{q}_1}{n_1}+\frac{\widehat{p}_2\widehat{q}_2}{n_2}}}$	
$n_1\widehat{p}\geq 5,\quad n_1\widehat{q}\geq 5$ $n_2\widehat{p}\geq 5,\quad n_2\widehat{q}\geq 5$; $\widehat{p}=\frac{x_1+x_2}{n_1+n_2}$	Valor estadística: $z=\frac{(\widehat{p}_1-\widehat{p}_2)-(p_1-p_2)}{\sqrt{\widehat{p}\widehat{q}\left(\frac{1}{n_1}+\frac{1}{n_2}\right)}}$	
Tolerancia: $\overline{x}\pm ks$	Tamaños: $n=\left(\frac{z_{\alpha/2}\sigma}{e}\right)^2$ $n=\frac{z^2_{\alpha/2}\widehat{p}\widehat{q}}{e^2}$ $n_{\max}=\frac{z^2_{\alpha/2}}{4e^2}$	Predicción para x_o $\overline{x}\pm z_{\alpha/2}\sigma\sqrt{1+\frac{1}{n}}$ $\overline{x}\pm t_{n-1,\alpha/2}s\sqrt{1+\frac{1}{n}}$
Valor P, para proporción	Valor $P=P(X\leq x)$	Valor $P=2P(X\leq x)$ si $x\leq np_o$
muestras pequeñas	Valor $P=P(X>x)$	Valor $P=2P(X>x)$ si $x>np_o$