Confidence intervals

Parameter	Assumptions	Endpoints
μ	$N(\mu, \sigma^2)$ or n large σ^2 known	$\overline{x} \pm z(\alpha/2)\dfrac{\sigma}{\sqrt{n}}$
μ	$N(\mu, \sigma^2)$ σ^2 unknown	$\overline{x} \pm t(\alpha/2; n-1)\dfrac{s}{\sqrt{n}}$
$\mu_1 - \mu_2$	Independent Distributions σ_1^2, σ_2^2 known n_1, n_2 large	$\overline{x} - \overline{y} \pm z(\alpha/2)\sqrt{\dfrac{\sigma_1^2}{n_1} + \dfrac{\sigma_2^2}{n_2}}$
$\mu_1 - \mu_2$	Independent Normal Distributions σ_1^2, σ_2^2 unknown but equal	$\overline{x} - \overline{y} \pm t(\alpha/2; n_1 + n_2 - 2)$ $\times \sqrt{\dfrac{(n_1 - 1)s_x^2 + (n_2 - 1)s_y^2}{n_1 + n_2 - 2}\left(\dfrac{1}{n_1} + \dfrac{1}{n_2}\right)}$
p	Binomial $b(n, p)$ n large	$\dfrac{y}{n} \pm z(\alpha/2)\sqrt{\dfrac{(y/n)(1 - y/n)}{n}}$
$p_1 - p_2$	Independent Binomial Distributions n_1, n_2 large	$\dfrac{y_1}{n_1} - \dfrac{y_2}{n_2} \pm z(\alpha/2)$ $\times \sqrt{\dfrac{(y_1/n_1)(1 - y_1/n_1)}{n_1} + \dfrac{(y_2/n_2)(1 - y_2/n_2)}{n_2}}$