	Single mean	*Two means*	*Single proportion*	*Two proportions*
Sampling Distribution	$\bar{X} \sim N\left(\mu, \frac{\sigma^2}{n}\right)$	$\bar{X}_1 - \bar{X}_2 \sim N\left(\mu_1 - \mu_2\ , \frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}\right)$	$\hat{p} \sim N\left(p, \frac{pq}{n}\right)$	$\hat{p}_1 - \hat{p}_2 \sim N\left(p_1 - p_2, \frac{p_1 q_1}{n_1} + \frac{p_2 q_2}{n_2}\right)$
Confident Interval	$\bar{X} \pm \left(Z_{1-\frac{\alpha}{2}} \frac{\sigma}{\sqrt{n}}\right)$ σ *known* $\bar{X} \pm \left(t_{1-\frac{\alpha}{2}, n-1} \frac{S}{\sqrt{n}}\right)$ σ *unknown*	$(\bar{X}_1 - \bar{X}_2) \pm \left(Z_{1-\frac{\alpha}{2}} \sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}\right)$ σ_1 *and* σ_2 *known* $(\bar{X}_1 - \bar{X}_2) \pm \left(t_{1-\frac{\alpha}{2}, n_1+n_2-2}\ Sp \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}\right)$ σ_1 *and* σ_2 *unknown* $S_p^2 = \frac{S_1^2(n_1-1) + S_2^2(n_2-1)}{n_1+n_2-2}$	$\hat{p} \pm \left(Z_{1-\frac{\alpha}{2}} \times \sqrt{\frac{\hat{p}\hat{q}}{n}}\right)$	$(\hat{p}_1 - \hat{p}_2) \pm \left(Z_{1-\frac{\alpha}{2}} \times \sqrt{\frac{\hat{p}_1\hat{q}_1}{n_1} + \frac{\hat{p}_2\hat{q}_2}{n_2}}\right)$
Testing	$Z = \frac{\bar{X} - \mu_o}{\sigma/\sqrt{n}}$ σ *known* $t = \frac{\bar{X} - \mu_o}{S/\sqrt{n}}$ σ *unknown*	$Z = \frac{(\bar{X}_1 - \bar{X}_2) - d}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}}$ σ_1 *and* σ_2 *known* $t = \frac{(\bar{X}_1 - \bar{X}_2) - d}{Sp\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$ σ_1 *and* σ_2 *unknown* $S_p^2 = \frac{S_1^2(n_1-1) + S_2^2(n_2-1)}{n_1+n_2-2}$	$Z = \frac{\hat{p} - p_0}{\sqrt{\frac{p_0 q_0}{n}}}$	$Z = \frac{(\hat{p}_1 - \hat{p}_2)}{\sqrt{\hat{p}\hat{q}\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$ $\hat{p} = \frac{x_1 + x_2}{n_1 + n_2}$