Parameters, Point Estimates, & Standard Errors Table

Population Parameter	Point Estimate (Sample Value)	True SE of Point Estimate	SE for Confidence Intervals	SE for Hypothesis Tests
μ	$\overline{x}$	$\frac{\sigma}{\sqrt{n}}$	$\frac{s}{\sqrt{n}}$	
$\mu_1 - \mu_2$	$\overline{x}_1 - \overline{x}_2$	$\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}$	$\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$	[2]
μ_{diff}	$\overline{x}_{diff}$	$\frac{\sigma_{diff}}{\sqrt{n}}$	$\frac{s_{diff}}{\sqrt{n}}$	
p	$\widehat{p}$	$\sqrt{\frac{p(1-p)}{n}}$	$\sqrt{\frac{\widehat{p}(1-\widehat{p})}{n}}$	$\sqrt{\frac{p_0(1-p_0)}{n}}$ [3]
$p_1 - p_2$	$\widehat{p}_1 - \widehat{p}_2$	$\sqrt{\frac{p_1(1-p_1)}{n_1} + \frac{p_2(1-p_2)}{n_1}}$	$\sqrt{\frac{\widehat{p}_1(1-\widehat{p}_1)}{n_1} + \frac{\widehat{p}_2(1-\widehat{p}_2)}{n_2}}$	$\sqrt{\frac{\widehat{p}(1-\widehat{p})}{n_1} + \frac{\widehat{p}(1-\widehat{p})}{n_2}}$ [4]

[2] When using t-test, if you think the population SD's are similar, can use pooled SD estimate $s_{pooled}^2 = \frac{s_1^2 \times (n_1 - 1) + s_2^2 \times (n_2 - 1)}{n_1 + n_2 - 2}$ in place of s_1^2 and s_2^2

[3] p_0 is the null value from $H_0 : p = p_0$

[4] $\widehat{p}$ is the pooled estimate $\frac{\widehat{p}_1 n_1 + \widehat{p}_2 n_2}{n_1 + n_2} = \frac{\text{total \# of successes in both groups}}{n_1 + n_2}$, since under $H_0 : p_1 = p_2$