Confidence Interval Estimation

One Population		Two Population	
Mean	**Proportion**	**Means**	**Proportions**
Use $1-\alpha = 0.95$ (unless stated otherwise)	Use $1-\alpha = 0.95$ (unless stated otherwise)	Use $1-\alpha = 0.95$ (unless stated otherwise)	Use $1-\alpha = 0.95$ (unless stated otherwise)
TInterval	1-PropZInt	2-SampTInt	2-PropZInt
$L < \mu < U$	$L < p < U$	$L < \mu_1 - \mu_2 < U$	$L < p_1 - p_2 < U$
The population mean μ is estimated to be between the lower limit L and the upper limit U with $(1-\alpha)\cdot 100\%$ confidence.	The population proportion p is estimated to be between the lower limit L and the upper limit U with $(1-\alpha)\cdot 100\%$ confidence.	The difference in two population means $\mu_1 - \mu_2$ is estimated to be between the lower limit L and the upper limit U with $(1-\alpha)\cdot 100\%$ confidence.	The difference in two population proportions $p_1 - p_2$ is estimated to be between the lower limit L and the upper limit U with $(1-\alpha)\cdot 100\%$ confidence.

Hypothesis Testing Procedure

One Population		Two Population	
Mean	**Proportion**	**Means**	**Proportions**
State hypothesis H_0: μ = or $\geq$ or $\leq$ μ_0 H_1: $\mu \neq$ or $<$ or $>$ μ_0	State hypothesis H_0: p = or $\geq$ or $\leq$ p_0 H_1: $p \neq$ or $<$ or $>$ p_0	State hypothesis H_0: μ_1 = or $\geq$ or $\leq$ μ_2 H_1: $\mu_1 \neq$ or $<$ or $>$ μ_2	State hypothesis H_0: p_1 = or $\geq$ or $\leq$ p_2 H_1: $p_1 \neq$ or $<$ or $>$ p_2
Use $\alpha = 0.05$ (unless stated otherwise)	Use $\alpha = 0.05$ (unless stated otherwise)	Use $\alpha = 0.05$ (unless stated otherwise)	Use $\alpha = 0.05$ (unless stated otherwise)
T-Test	1-PropZTest	2-SampTTest	2-PropZTest
Decision: Reject H_0 when p-value $\leq \alpha$ Otherwise do not reject H_0	Decision: Reject H_0 when p-value $\leq \alpha$ Otherwise do not reject H_0	Decision: Reject H_0 when p-value $\leq \alpha$ Otherwise do not reject H_0	Decision: Reject H_0 when p-value $\leq \alpha$ Otherwise do not reject H_0
State conclusion	State conclusion	State conclusion	State conclusion