

Inference For	Assumptions	H_0 , Test Stat, Reference	Interval	Section
μ (one mean)	σ "known" and observations normal or large n	$H_0: \mu = \#$ $Z = \frac{\bar{x} - \#}{\sigma/\sqrt{n}}$ standard normal	$\bar{x} \pm z \frac{\sigma}{\sqrt{n}}$	8.1, 9.2
	observations normal or large n	$H_0: \mu = \#$ $T = \frac{\bar{x} - \#}{s/\sqrt{n}}$ t with $\nu = n - 1$	$\bar{x} \pm t \frac{s}{\sqrt{n}}$	8.2, 9.3
$\mu_1 - \mu_2$ (difference in means)	independent samples, observations normal or large n_1, n_2	$H_0: \mu_1 - \mu_2 = \#$ $T = \frac{\bar{x}_1 - \bar{x}_2 - \#}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$ t with ν the smaller of $n_1 - 1$ and $n_2 - 1$	$\bar{x}_1 - \bar{x}_2 \pm t \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$	10.2
	independent normal samples $\sigma_1 = \sigma_2$	$H_0: \mu_1 - \mu_2 = \#$ $T = \frac{\bar{x}_1 - \bar{x}_2 - \#}{s_P \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$ t with $\nu = n_1 + n_2 - 2$	$\bar{x}_1 - \bar{x}_2 \pm t s_P \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}$	
μ_d (mean difference)	(paired data) normal differences or large n	$H_0: \mu_d = \#$ $T = \frac{\bar{d} - \#}{s_d/\sqrt{n}}$ t with $\nu = n - 1$	$\bar{d} \pm t \frac{s_d}{\sqrt{n}}$	10.1

Inference For	Assumptions	H_0 , Test Stat, Reference	Interval	Section
p (one proportion)	large n	$Z = \frac{\hat{p} - \#}{\sqrt{\frac{\#(1-\#)}{n}}}$ $H_0: p = \#$ standard normal	$\hat{p} \pm z \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$ or $\hat{p} \pm z \frac{1}{2\sqrt{n}}$	8.3, 9.4
$p_1 - p_2$ difference in proportions	independent samples large n_1, n_2	$Z = \frac{\hat{p}_1 - \hat{p}_2}{\sqrt{\hat{p}(1-\hat{p})} \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$ $H_0: p_1 - p_2 = 0$ use $\hat{p} = \frac{n_1\hat{p}_1 + n_2\hat{p}_2}{n_1 + n_2}$ standard normal	$\hat{p}_1 - \hat{p}_2 \pm z \sqrt{\frac{\hat{p}_1(1-\hat{p}_1)}{n_1} + \frac{\hat{p}_2(1-\hat{p}_2)}{n_2}}$ or $\hat{p}_1 - \hat{p}_2 \pm z \cdot \frac{1}{2} \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}$	10.3