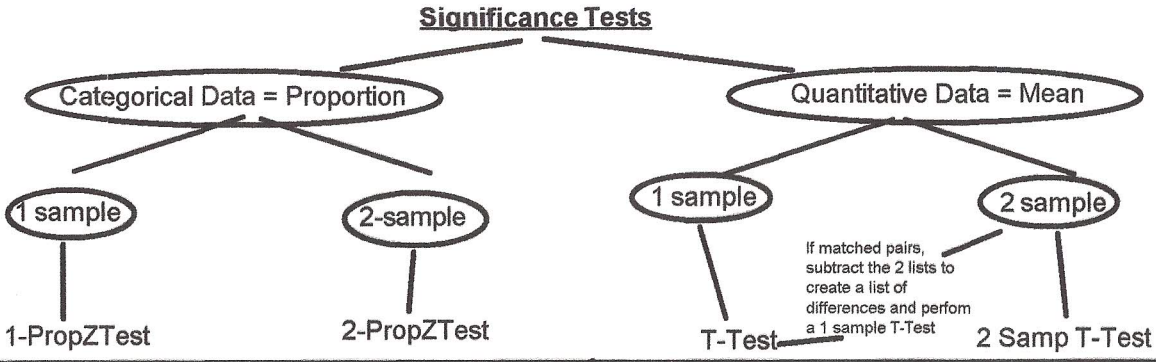
Significance Tests



1-PropZTest	2-PropZTest	T-Test	2 Samp T-Test
$H_o: p =$ $H_a: p$ $z = \frac{\hat{p} - p}{\sqrt{\frac{p(1-p)}{n}}}$ *conditions:* $*np \geq 10$ *AND* $n(1-p) \geq 10$ **SRS from the population of interest*	$H_o: p_1 = p_2$ $H_a: p_1 \quad p_2$ $z = \frac{\hat{p}_1 - \hat{p}_2}{\sqrt{\hat{p}_c(1-\hat{p}_c)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$ *conditions:* $*n_1\hat{p}_c \geq 5$ *AND* $n_1(1-\hat{p}_c) \geq 5$ $n_2\hat{p}_c \geq 5$ *AND* $n_2(1-\hat{p}_c) \geq 5$ **2 independent SRS from the populations of interest OR random assignment*	$H_o: \mu =$ $H_a: \mu$ $t = \frac{\overline{x} - \mu}{\frac{s}{\sqrt{n}}}$ *conditions:* $*n \geq 30$ *OR the population is normal* **SRS from the population of interest*	*matched pairs:* $H_o: \mu_d = 0$ $H_a: \mu_d \quad 0$	$H_o: \mu_1 = \mu_2$ $H_a: \mu_1 \quad \mu_2$ $t = \frac{\overline{x}_1 - \overline{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$ *conditions:* $*n_1 \geq 30$ *AND* $n_2 \geq 30$ *OR the populations are normal* **2 independent SRS from the populations of interest OR random assignment*

1-PropZInt	2-PropZInt	T-Int	2-SampT-Int
$\hat{p} \pm z^* \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$ *conditions:* $*n\hat{p} \geq 10$ *AND* $n(1-\hat{p}) \geq 10$ **SRS from the population of interest*	$(\hat{p}_1 - \hat{p}_2) \pm z^* \sqrt{\frac{\hat{p}_1(1-\hat{p}_1)}{n_1} + \frac{\hat{p}_2(1-\hat{p}_2)}{n_2}}$ *conditions:* $*n_1\hat{p}_1 \geq 5$ *AND* $n_1(1-\hat{p}_1) \geq 5$ $n_2\hat{p}_2 \geq 5$ *AND* $n_2(1-\hat{p}_2) \geq 5$ **2 independent SRS from the populations of interest OR random assignment*	$\overline{x} \pm t^* \frac{s}{\sqrt{n}}$ *conditions:* $*n \geq 30$ *OR population is normal* **SRS from the population of interest*	$(\overline{x}_1 - \overline{x}_2) \pm t^* \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$ *conditions:* $*n_1 \geq 30$ *AND* $n_2 \geq 30$ *OR populations are normal* **2 independent SRS from the populations of interest OR random assignment*