$$\bar{x} \pm z_{\frac{\alpha}{2}} \frac{\sigma}{\sqrt{n}} \text{ or } \bar{x} \pm t_{\frac{\alpha}{2},n-1} \frac{s}{\sqrt{n}}$$

$$\left(\bar{x}_1 - \bar{x}_2\right) \pm t_{\frac{\alpha}{2},df} \sqrt{\frac{s_1{}^2}{n_1} + \frac{s_2{}^2}{n_2}} \text{ where}$$

$$df = \frac{\left(s_1^2/n_1 + s_2^2/n_2\right)^2}{\frac{\left(s_1^2/n_1\right)^2}{n_1 - 1} + \frac{\left(s_2^2/n_2\right)^2}{n_2 - 1}} \text{ or}$$

$$\left(\bar{x}_1 - \bar{x}_2\right) \pm t_{\frac{\alpha}{2},n_1+n_2-2}\, s_p \sqrt{\frac{1}{n_1} + \frac{1}{n_2}} \text{ where}$$

$$s_p = \sqrt{\frac{(n_1 - 1)s_1{}^2 + (n_2 - 1)s_2{}^2}{n_1 + n_2 - 2}}$$

Chapter 9

$$z_0 = \frac{\bar{x} - \mu_0}{\frac{\sigma}{\sqrt{n}}} \text{ or } t_0 = \frac{\bar{x} - \mu_0}{\frac{s}{\sqrt{n}}}$$

$$z_0 = \frac{p - \pi_0}{\sqrt{\frac{\pi_0(1-\pi_0)}{n}}} \text{ or } z_0 = \frac{x - n\pi_0}{\sqrt{n\pi_0(1-\pi_0)}}$$

Chapter 10

$$t_0 = \frac{\bar{D} - \mu_D}{\frac{s_D}{\sqrt{n}}} \text{ where } \bar{D} = \frac{\sum_{i=1}^{n} d_i}{n} \text{ and}$$

$$s_D = \sqrt{\frac{\sum_{i=1}^{n}\left(d_i - \bar{D}\right)^2}{n-1}}.$$

$$z_0 = \frac{\left(\bar{x}_1 - \bar{x}_2\right) - \left(\mu_1 - \mu_2\right)}{\sqrt{\frac{\sigma_1{}^2}{n_1} + \frac{\sigma_2{}^2}{n_2}}}$$

$$t_0 = \frac{\left(\bar{x}_1 - \bar{x}_2\right) - \left(\mu_1 - \mu_2\right)}{s_p\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$t_0 = \frac{\left(\bar{x}_1 - \bar{x}_2\right) - \left(\mu_1 - \mu_2\right)}{\sqrt{\frac{s_1{}^2}{n_1} + \frac{s_2{}^2}{n_2}}}$$

If $\bar{p} = \frac{n_1 p_1 + n_2 p_2}{n_1 + n_2} = \frac{x_1 + x_2}{n_1 + n_2}$ then

$$z = \frac{\left(p_1 - p_2\right) - \left(\pi_1 - \pi_2\right)}{\sqrt{\bar{p}(1 - \bar{p})\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$F_0 = \frac{s_1^2}{s_2^2}$ with

$df_1 = n_1 - 1$ and $df_2 = n_2 - 1$.