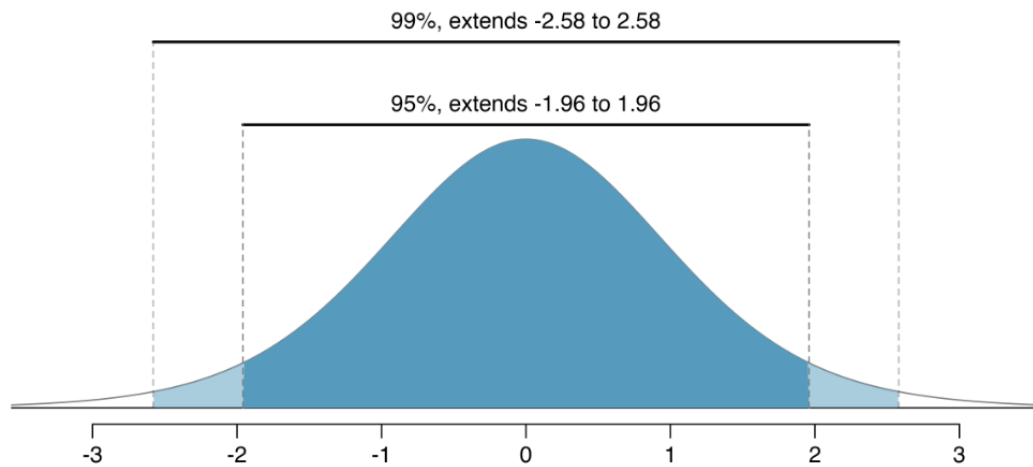# Formula Sheet

Standard Normal Distribution Cut Offs

Formulas

Single proportion SE calculations

$$\sqrt{\frac{\pi_o*(1-\pi_o)}{n}}$$

$$\sqrt{\frac{\hat{p}*(1-\hat{p})}{n}}$$

Difference in proportions SE calculations

$$\sqrt{\frac{\hat{p_{\text{pool}}}*(1-\hat{p_{\text{pool}}})}{n1} + \frac{\hat{p_{\text{pool}}}*(1-\hat{p_{\text{pool}}})}{n2}}$$

$$\sqrt{\frac{\hat{p_1}*(1-\hat{p_1})}{n_1} + \frac{\hat{p_2}*(1-\hat{p_2})}{n_2}}$$

Single mean SE calculations

$$\frac{s}{\sqrt{n}}$$

Difference in means SE calculations

$$\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}$$

General Confidence Interval Formula

$$statistic \pm multiplier * SE$$

General Formula for Test Statistic

$$\frac{statistic - \text{null value}}{SE}$$