Formula Sheet for PSYC3450: FINAL EXAM

$$\bar{x} = \frac{\sum x}{N}$$

$$\mu = \frac{\sum x}{N}$$

$$s = \sqrt{\frac{SS}{N-1}}$$

$$\sigma = \sqrt{\frac{SS}{N}}$$

$$z = \frac{x - \bar{x}}{s}$$

$$z = \frac{x - \mu}{\sigma}$$

$$x = \bar{x} + z(s)$$

$$x = \mu + z(\sigma)$$

$$SS = \sum x^2 - \frac{(\sum x)^2}{N}$$

$$SS = \sum (x - \bar{x})^2$$

$$SS = \sum (x - \mu)^2$$

$$s^2 = \frac{SS}{N-1}$$

$$\sigma^2 = \frac{SS}{N}$$

$$y = bx + a$$

$$b = r\left(\frac{s_y}{s_x}\right)$$

$$a = \bar{y} - b\bar{x}$$

$$z_{obt} = \frac{\bar{x} - \mu_{\bar{x}}}{\sigma_{\bar{x}}}$$

$$t_{obt} = \frac{\bar{x} - \mu_{\bar{x}}}{s_{\bar{x}}}$$

$$t_{obt} = \frac{\bar{D}}{s_{\bar{D}}}$$

$$t_{obt} = \frac{\bar{x}_1 - \bar{x}_2}{s_{x1-x2}}$$

$$\mu_{\bar{x}} = \mu$$

$$\sigma_{\bar{x}} = \frac{\sigma}{\sqrt{N}}$$

$$s_{\bar{x}} = \frac{s}{\sqrt{N}}$$

$$s_{\bar{D}} = \sqrt{\frac{SS_D}{N(N-1)}}$$

$$s_{x1-x2} = \sqrt{\left(\frac{SS_1 + SS_2}{n_1 + n_2 - 2}\right)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}$$

$$r = \frac{\sum xy - \frac{(\sum x)(\sum y)}{N}}{\sqrt{\left(\sum x^2 - \frac{(\sum x)^2}{N}\right)\left(\sum y^2 - \frac{(\sum y)^2}{N}\right)}}$$