Psychology 216 Your Name: _____

Formulas for Final Exam

$$z = \frac{x - \mu}{\sigma_x} \qquad \sigma = \sqrt{\frac{SS}{N}} \qquad \sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}}$$

$$z = \frac{\bar{x} - \mu}{\sigma_{\bar{x}}} \qquad s = \sqrt{\frac{SS}{n-1}} \qquad s_{\bar{x}} = \frac{s}{\sqrt{n}}$$

$$t = \frac{\bar{x} - \mu}{s_{\bar{x}}} \qquad t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{s_{\bar{x}_1 - \bar{x}_2}} \qquad s_{\bar{x}_1 - \bar{x}_2} = \sqrt{\frac{s_p^2}{n_1} + \frac{s_p^2}{n_2}}$$

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{\sqrt{\frac{s_p^2}{n_1} + \frac{s_p^2}{n_2}}} \qquad s_p^2 = \frac{df_1 s_1^2 + df_2 s_2^2}{df_1 + df_2} \qquad s_p^2 = \frac{SS_1 + SS_2}{df_1 + df_2}$$

$$t = \frac{\bar{D} - \mu}{s_{\bar{D}}} \qquad SS = \sum D^2 - \frac{\left(\sum D\right)^2}{n} \qquad SS = \sum x^2 - \frac{\left(\sum x\right)^2}{n} \qquad SS = \sum (x - \bar{x})^2$$

$$SS_{Tot} = \sum x^2 - \frac{G^2}{N} \qquad SS_{Betw-treat} = \sum \frac{T^2}{n} - \frac{G^2}{N} \qquad SS_{within} = \sum SS_{inside\ each\ treatment}$$

$$SS_{Bet\ Subjects} = \sum \frac{p^2}{k} - \frac{G^2}{N} \qquad HSD = q\sqrt{\frac{MS_{within}}{n}} \qquad HSD = q\sqrt{\frac{MS_{error}}{n}}$$

$$df_{tot} = N - 1 \qquad df_{Bet-Treat} = k - 1 \qquad df_{within} = N - k \qquad df_{bet-Subjects} = n_s - 1$$

$$r = \frac{SP}{\sqrt{SS_x\, SS_y}} \qquad SP = \sum XY - \frac{\sum X \sum Y}{n} \qquad SP = \sum (x - \bar{x})(y - \bar{y})$$