

# STAT 705 Test 2 Formulas

$$d_1 = b_1 - b_1^*(\alpha/2) \quad L_r = b_1 - d_2$$

$$d_2 = b_1^*(1 - \alpha/2) - b_1 \quad \Rightarrow \quad U_r = b_1 + d_1$$

$$e^{\left[ \frac{y\theta - b(\theta)}{a(\phi)} + c(y, \phi) \right]}$$

$$b'(\theta)$$

$$b''(\theta) a(\phi)$$

$$G^2 = -2 \left[ \ln L_R - \ln L_F \right]$$

$$\frac{y_i - \hat{\pi}_i}{\sqrt{\hat{\pi}_i (1 - \hat{\pi}_i)}}$$

$$2 \sum_{i=1}^n \left[ y_i \ln \left( \frac{y_i}{\hat{\mu}_i} \right) - (y_i - \hat{\mu}_i) \right]$$

$$\sum_{i=1}^n \frac{(y_i - \hat{\mu}_i)^2}{\hat{\mu}_i}$$

$$w_i = \frac{1}{\lambda} K \left( \frac{x^* - x_i}{\lambda} \right)$$

$$\sum_{i=1}^n \frac{w_i}{\sum_{j=1}^n w_j} y_i$$

$$\frac{1}{n} \sum_{i=1}^n \left[ y_i - \hat{m}_{(i)}(x_i; \lambda) \right]^2$$

$$\sum_{i=1}^n \left[ y_i - \hat{m}(x_i) \right]^2 + \lambda \int \left[ \hat{m}''(x) \right]^2 dx$$

$$\sum_{k=1}^r \text{SSE}(R_{rk}) + \lambda r$$