STAT 704 Test 3 Formula Sheet, Fall 2026

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

$d_2 = b_1^*(1 - \alpha/2) - b_1$

$L_r = b_1 - d_2$

$U_r = b_1 + d_1$

$f(y \mid \theta, \phi) = \exp[(y\theta - b(\theta))/a(\phi) + c(y, \phi)]$

$G^2 = -2[\ln(L_R) - \ln(L_F)]$

$-2 \ln L + 2p$

$-2 \ln L + p \ln(n)$

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

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

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

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