

$$1. \alpha = 1 - 0.99 = 0.01$$

$$S_{\bar{D}} = \sqrt{\frac{SS}{n(n-1)}} = \sqrt{\frac{72}{9 \times 8}} = 1$$

置信区间为 $(\bar{D} - t_{\alpha}(8) \cdot S_{\bar{D}}, \bar{D} + t_{\alpha}(8) \cdot S_{\bar{D}})$

查表得 $t(8) = 2.896$

代入得置信区间为 $(6.604, 12.396)$

