

7. (BY HAND)

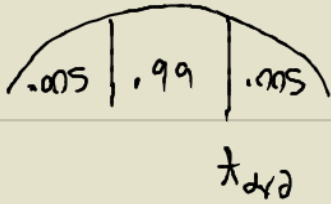
$$n=15$$

$$\bar{X}=18.2$$

$$S=0.5$$

WANT: 99% C.I.

① FIND  $t_{\alpha/2}$



$$\begin{aligned} DF &= n-1 \\ &= 15-1 \\ &= 14 \end{aligned}$$

SO

$$t_{\alpha/2} = 2.977$$

$$\begin{aligned} \textcircled{2} \quad LB &= \bar{X} - t_{\alpha/2} \cdot \frac{S}{\sqrt{n}} \\ &= 18.2 - 2.977 \cdot \frac{0.5}{\sqrt{15}} \end{aligned}$$

$$LB = 17.82$$

$$UB = \bar{X} + t_{\alpha/2} \cdot \frac{S}{\sqrt{n}}$$

$$UB = 18.2 + 2.977 \cdot \frac{0.5}{\sqrt{15}}$$

$$UB = 18.58$$

$$(17.82, 18.58)$$

7. (CALC)

$$n=15$$

$$\bar{X}=18.2$$

$$S=0.5$$

99% C.I.

$$(17.82, 18.58)$$