$s=$

17. (1) $\bar{X}-\frac{s}{\sqrt{n}}u_{0.05}=4.285$

(2) $\bar{X}+\frac{s}{\sqrt{n}}t_{0.05}(4)=4.416$

18. (1) $\bar{X}=14.72$, $s^2=1.9065$

$\bar{X}-\frac{s}{\sqrt{n}}t_{0.05}(n-1)=14.2917$

$\bar{X}+\frac{s}{\sqrt{n}}t_{0.05}(n-1)=15.1483$

M: (14.29, 15.14)

$\frac{(n-1)\cdot s^2}{\chi^2_{0.05}(29)}=1.2992$

$\frac{(n-1)\cdot s^2}{\chi^2_{0.95}(29)}=3.1222$ σ^2: (1.2992, 3.1222)

(2) $\bar{X}-\frac{s}{\sqrt{n}}\cdot t_{0.1}(29)=14.3895 \rightarrow$ T

$\bar{X}+\frac{s}{\sqrt{n}}\cdot t_{0.1}(29)=15.0505 \rightarrow$ 上

(3) $\frac{\sum_{i=1}^{n}(x_i-\bar{x})^2}{\chi^2_{0.1}(29)}=1.2635 \rightarrow$ T

$\frac{\sum_{i=1}^{n}(x_i-\bar{x})^2}{\chi^2_{0.9}(29)}=2.7979 \rightarrow$ 上

1. $U:=\frac{\bar{X}-30}{\sigma/\sqrt{n}}\sim N(0,1)$

$u_{0.025}=1.96$, $C=\frac{\sigma}{\sqrt{n}}\cdot u_{0.025}=0.8765$

$\bar{x}=31.1117$, $|\bar{x}-30|>0.8765$, 在拒绝域

有明显差异

2. $U=\frac{\bar{X}-6.5}{\sigma/\sqrt{n}} \sim N(0,1)$，$C=\frac{\sigma}{\sqrt{n}} \cdot u_{0.025}=0.143$

$\bar{X}=6.48$. $|\bar{x}-6.5|=0.02<0.143$，不在拒绝域

正常工作