week6.

助教作業

3. $n=10$ $\bar{x}=13.63$ $s=6.05$ $n-1=9$ $1-a=0.98$ $\frac{\alpha}{2}=0.01$

$\bar{x}\pm t_{\frac{\alpha}{2}}(n-1)\frac{s}{\sqrt{n}}=13.63\pm t_{0.01}(9)\frac{6.05}{\sqrt{10}}$

$=13.63\pm2.821\times1.91$

$=13.63\pm5.39$

$\Rightarrow(8.24,19.02)$ #

4. (1) $n=1200$ $\hat{p}=0.33$, $1-a=0.98$

$0.33\pm Z_{0.01}\sqrt{\frac{0.33\times0.67}{1200}}=0.33\pm0.3=(0.30,0.36)$ #

(2) $n=820$ $x=650$ $1-a=0.95$

$\hat{p}=\frac{650}{820}=0.79$ $\quad 0.79\pm1.96\times\sqrt{\frac{0.79\times0.21}{820}}=0.79\pm1.96\times0.14=(0.76,0.82)$ #

14.

(1) $n=15$ $\bar{x}=1.73$ $s=0.8$ $1-a=0.95$

$t_{0.025}(15-1)=2.145$ $\quad 1.73\pm2.145\times\frac{0.8}{\sqrt{15}}=(1.29,2.17)$ #

(2) $n=15$, $\bar{x}=1.73$ $s=0.8$ $1-a=0.8$

$t_{0.1}(14)=1.345$ $\quad 1.73\pm1.345\times\frac{0.8}{\sqrt{15}}=(1.45,2.01)$ #