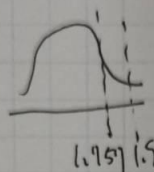
6. $\bar{x}=4.65$. $s=1.26$.

(1) $n=40$ $\alpha=0.05$.

$H_0: \mu=4.3$ $H_1: \mu \neq 4.3$.

$z_{0.025}=1.96$.

$\frac{4.65-4.3}{\frac{1.26}{\sqrt{40}}}=1.959$

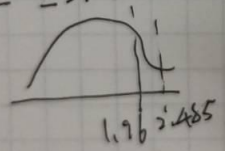


(2) $n=80$. $\alpha=0.05$.

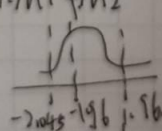
$H_0: \mu=4.3$ $H_1: \mu \neq 4.3$

$z_{0.025}=1.96$. 拒绝H_0.

$\frac{4.65-4.3}{\frac{1.26}{\sqrt{80}}}=2.485$



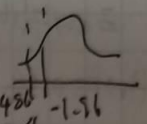
7. $H_0: \mu_1=\mu_2$ $H_1: \mu_1 \neq \mu_2$



$\frac{(\bar{x}-\bar{y})-0}{\sqrt{\frac{s_1^2}{n_1}+\frac{s_2^2}{n_2}}}=\frac{38.3-41}{\sqrt{\frac{4^2}{100}+\frac{3^2}{80}}}=2.045$.

8. $H_0: \mu_1=\mu_2$

$H_1: \mu_1 \neq \mu_2$.



$\frac{(\bar{x}-\bar{y})-0}{s_p\sqrt{\frac{1}{n_1}+\frac{1}{n_2}}}=\frac{32-34}{3.430\sqrt{\frac{1}{64}+\frac{1}{81}}}=-3.486$

$s_p=\sqrt{\frac{(n_1-1)s_1^2+(n_2-1)s_2^2}{n_1+n_2-2}}$

$=\sqrt{\frac{63\times 3.2^2+80\times 3.6^2}{143}}=3.430$

9. $t_{0.025}(18)=2.101$

$H_0: \mu_1=\mu_2$ $H_1: \mu_1 \neq \mu_2$.

$\frac{(\bar{x}-\bar{y})-0}{s_p\sqrt{\frac{1}{n_1}+\frac{1}{n_2}}}=\frac{82.6-84.9}{s_p\sqrt{\frac{1}{10}+\frac{1}{10}}}=-0.503$.

$s_p=\sqrt{\frac{9\times(4.53)^2+9\times 6.65^2}{18}}$

$=5.693$

不拒绝H_0.

10.

$z_{0.05}=1.645$

$H_0: p \geq 0.04$ $H_1: p<0.04$.

$z=\frac{\hat{p}-p_0}{\sqrt{\frac{p_0(1-p_0)}{n}}}=\frac{0.45-0.4}{\sqrt{\frac{0.4\times 0.6}{100}}}=1.021$

拒绝H_0