ch7.

習題6.

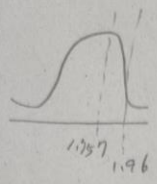
$\bar{x}=4.65 \quad S=1.26$

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

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

$Z_{0.025}=1.96$

$$\frac{4.65-4.3}{\frac{1.26}{\sqrt{40}}}=1.757$$

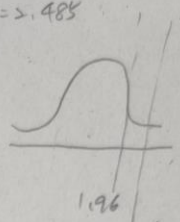


⇒不拒絕

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

$H_0:\mu=4.3 \quad H_1:\mu\neq 4.3 \quad Z_{0.025}=1.96$

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

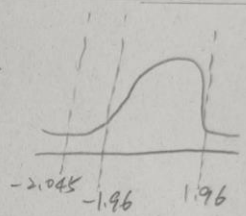


⇒ 拒絕 H_0 ※

習題7.

$H_0:\mu_1=\mu_2 \quad H_1:\mu_1\neq\mu_2 \quad Z_{0.025}=1.96$

$$\frac{(\bar{X}-\bar{Y})-0}{\sqrt{\frac{S_1^2}{n_1}+\frac{S_2^2}{n_2}}}=\frac{38.3-40.1}{\sqrt{\frac{40}{100}+\frac{30}{80}}}=2.045$$



⇒ 拒絕 H_0 ※

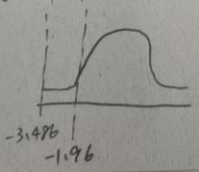
習題8.

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

$$\frac{(\bar{X}-\bar{Y})-0}{S_p\sqrt{\frac{1}{n_1}+\frac{1}{n_2}}}$$

$$S_p=\sqrt{\frac{(n_1-1)S_1^2+(n_2-1)S_2^2}{n_1+n_2-2}}=\sqrt{\frac{63\times 3.2^2+80\times 3.6^2}{143}}=3.430$$

$$=\frac{32-34}{3.430\sqrt{\frac{1}{64}+\frac{1}{81}}}=-3.486$$



⇒ 拒絕 H_0 ※

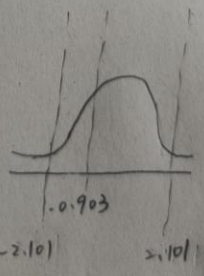
習題9.

$t_{0.025}(\underbrace{18}_{n_1+n_2-2})=2.101$

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

$$\frac{(\bar{X}-\bar{Y})-0}{S_p\sqrt{\frac{1}{n_1}+\frac{1}{n_2}}}=\frac{82.6-84.9}{5.693\sqrt{\frac{1}{10}+\frac{1}{10}}}=-0.903$$

$$S_p=\sqrt{\frac{9\times 14.5765+9\times 6.6575^2}{18}}=5.693$$

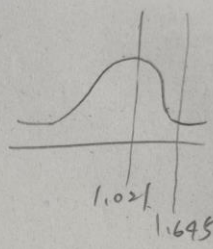


⇒ 不拒絕 H_0 ※

ch7.
習題 10 $H_0 = P \geq 0.4$ $H_1 = P < 0.4$

$Z_{0.05} = 1.645$

$$Z = \frac{\hat{P} - P_0}{\sqrt{\frac{P_0(1-P_0)}{n}}} = \frac{0.45 - 0.4}{\sqrt{\frac{0.4 \times 0.6}{100}}} = 1.021$$



⇒ 拒絕 H_0 ※