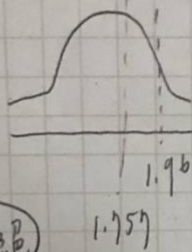


b. $\bar{x} = 4.65, S = 1.26$

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

$Z_{0.025} = 1.96$

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



不拒绝 H_0

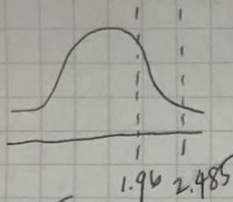
(2) $n = 80, \alpha = 0.05$

$H_0: \mu = 4.3$

$H_1: \mu \neq 4.3$

$Z_{0.025} = 1.96$

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



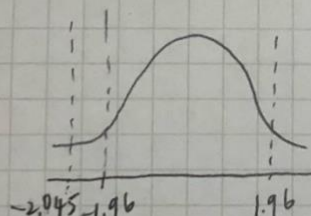
拒绝 H_0

7. $H_0: \mu_1 = \mu_2$

$H_1: \mu_1 \neq \mu_2$

$Z_{0.025} = 1.96$

$$\frac{(\bar{x} - \bar{y}) - 0}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}} = \frac{38.3 - 40.1}{\sqrt{\frac{40}{100} + \frac{30}{80}}} = -2.045$$

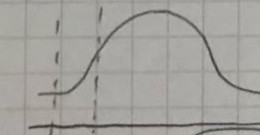


拒绝 H_0

8. $H_0: \mu_1 = \mu_2$

$H_1: \mu_1 \neq \mu_2$

$$\frac{(\bar{x} - \bar{y}) - 0}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}} = \frac{32 - 34}{\sqrt{\frac{63}{64} + \frac{80}{81}}} = -3.486$$



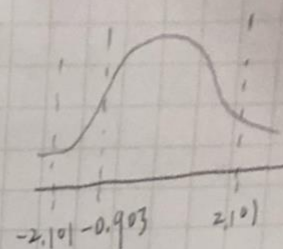
拒绝 H_0

$$S_p = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}} = \sqrt{\frac{63 \times 3.2^2 + 80 \times 3.6^2}{143}} = 3.430$$

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

$H_0: \mu_1 = \mu_2$

$H_1: \mu_1 \neq \mu_2$



$$\frac{(\bar{x} - \bar{y}) - 0}{S_p \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} = \frac{82.6 - 84.9}{5.693 \sqrt{\frac{1}{10} + \frac{1}{10}}} = -2.903$$

拒绝 H_0

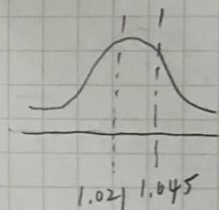
$$S_p = \sqrt{\frac{9 \times (4.526)^2 + 9 \times (6.575)^2}{18}} = 5.693$$

10. $Z_{0.05} = 1.645$

$H_0: p \geq 0.4$

$H_1: p < 0.4$

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



不拒绝 H_0